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Finanční analýza společnosti Prada

Financial Analysis of Prada Company

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List of Abbreviations
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Contents

1 Introduction

As we know, financial analysis is very essential in the business of the company. Financial analysis is to use differnent data to analyze and compare, then get some valid information to know more about the financial situation of the company we research, and it has different functions in different stages of enterprise development. Managers use it to make decisions and it plays the unique function and role of financial analysis sufficiently. Financial analysis provides accurate information or basis for investors, creditors, operators who care about enterprises to understand the past conditions of enterprises, evaluate the present situation of enterprises and predict the future of enterprises to make correct decisions.

The aim of the thesis is to analyze and research financial conditions of the company PRADA from 2013 to 2017 by using common-size analysis and adopting financial ratios.

There are five chapters in this thesis. In chapter 1, it is about the introduction. In this chapter, it describes the importance of the financial analysis and emphasizes its role in the economy.

In chapter 2, it describes the details of the financial analysis. It is about the financial analysis methodology. And it can be divided into three concrete concepts. The first concept is about the financial statements, which includes balanced sheet, income statement, cash flow statement. The three financial statements are essential to every company. The balance sheet reflects the balance of assets, liabilities and equity of a company. The income statement reflects the income, expenses of the enterprise in the current period and the amount and structure of gains and losses. The cash flow statement reflects the background of cash flow of an enterprise, which is divided into three parts: operating activities, investment activities and financing activities. The second concept is about the common-size analysis, analysis of financial statements data and their changes over the time, identifying the trends and major differences, which is about two main parts, vertical common-size analysis and horizontal common-size analysis. The third concept is about the financial ratios analysis, which are mainly about solvency ratio analysis, liquidity ratio analysis, profitability ratio analysis, activity ratios and DuPont analysis.

In chapter 3, it describes the financial characteristics of PRADA. In this chapter, it will introduce PRADA company's history, basic business information, current competition situation in the market. Then collect data from PRADA company's financial report from 2013 to 2017, and make financial statements which have been introduced by using the data. And according to the data, analyze PRADA situations according to the financial analysis method common-size analysis which have been described in the previous chapter.

In chapter 4, it describes the concrete financial analysis of PRADA, using financial ratio analysis to analyze PRADA company. And we can know more about PRADA conditions in details, so will use calculation formulas to calculate the different financial ratios, the specific way is to calculate profitability ratios, liquidity ratios, solvency ratios, activity ratios, and adopt DuPont analysis method to analyze the decomposition ratios of the return on equity of PRADA from 2013 to 2017.

Lastly, the chapter 5 is about the conclusion.

2 Description of the Financial Analysis Methodology

In this chapter, we will describe the financial analysis methodology. It is mainly about three parts. The first one is to introduce the financial statements, which can be divided in to three concrete concepts, balanced sheet, income statement and cash flow statement. And the second part is to introduce the common-size analysis, it is composed of vertical common-size analysis and horizontal common-size. And the third part is about the financial ratios analysis, for example, profitability ratios, liquidity ratios, solvency ratios, activity ratios and DuPont ratios.

As we know, financial activities are inseparable from financial analysis, because it is very essential in financial markets. And we should understand, the three main kinds of activities all needs to have financial analysis, the three activities are respectively operating activity, investing activity and financial activity. Besides, the financial management is relative to the financial analysis, for example, the manager in one company, he must have good judgment and decision-making ability, so it is necessary for him to have the good financial analysis skills. Of course, it is also very essential to the whole company, because analyzing data reports accurately and seriously, they can improve the whole company's efficiency.

Financial analysis can provide accurate information to people by analyzing the financial situation, which has a great influence on the period, evaluate the present situation of enterprises and predict the future of enterprises to make correct decisions. We have various ways to analyze according to the reports, tables, ratios and so on.

By financial analyzing, the companies can learn more about their problems and disadvantages, so they can face them bravely, and make a huge change on their management mode and innovate for their company. Then these companies can enhance the competitive strength and gain more profits in the competitive market. There is no doubt, it is also has an indelible effect on the whole economy. Because having right financial analysis in the financial markets, it can promote the whole economic situation having a healthy development trend.

2.1 Financial statements

Financial statements can truthfully reflect the financial position and the results. And we should learn, the object of financial statement analysis is the basic activities of enterprises. The goal of financial statement analysis is to obtain more real information and evaluate its performance, at the same time, find its problems in time and to solve them efficiently. There are three statements consisting of financial statements. Balance sheet reflects the situation of the assets, liabilities and equity. Income statement represents the source of a company's revenues, expenses and so on. Cash flow statement represents the cash inflows and outflows of a company, and it exists in three kinds of activities, operating activity, investing activity and financial activity.

2.1.1 Balance sheet

Balance sheet, also called the statement of financial condition, makes full use of the accounting balance. A balance sheet is financial statement that represents a company financial situation at a point in time. It is divided into three key sections, assets, liabilities, and shareholder equity. The following formula is about the balance sheet:

$$\textit{Total Assets} = \textit{Total Equity} + \textit{Total liabilities}. \tag{2.1}$$

As we can see, the total asset is equal to the total equity and total liability, so they form a balance, its important function is to show the business situation. The following Tab.2.1 represents the specific classifications of the assets, equity and liability.

Tab.2.1 Structure of balance sheet

Assets	Equity + Liability
Long-term assets: tangible assets intangible assets financial investments **Current assets:** cash and cash equivalents accounts receivable Inventories other current assets	**Equity:** common and preferred shares share premium retained earnings **Liabilities:** **current liabilities:** current borrowings accounts payable other short-term liabilities **long-term liabilities:** bonds issued long-term bank loans

In the Tab.2.1, we can see assets are on the left side. The assets can be divided into fixed assets and current assets. The fixed assets include long-term assets and non-current assets. They can be divided into three parts in details. The first part is tangible assets (equipment, land, buildings, etc.), the second part is intangible assets (trademark, patents, goodwill, etc.), the third part is financial investments (investments in securities and assets of other firms, such as shares, bonds, etc.). The current assets are also called short-term assets, including inventories, receivables, goods, cash, and other short-term assets.

Equity is on the right side. Equity is the important indicator of the intrinsic value. And it represents the shareholder´s investment into company, capital belonging to the owners or shareholders of the company, contribution of the owners of buying shares or by company´s profit of the retained earnings. It can be divided into three main parts, common and preferred shares, share premium, and retained earnings.

Liability is also on the right side. Liability represents the current obligations of one company resulting from past transactions or events. It can be divided into two types, one is short-term liability, the other is long-term liability. They are mainly classified according to the time whether is over one year.

2.1.2 Income statement

Income statement can be also called profit/loss statement, which provides the information on revenues and costs of the company, and the business results of the profits or losses during a particular period of time. It can analyze profitability ability and the tendency of the future. The following formula is about the income statement:

$$\textit{Revenues less costs and expenses = Net income/loss.} \tag{2.2}$$

Revenues are those gains charged for the delivery of goods or services in the ordinary activities of the company, and costs and expenses are those may be spent in the ordinary activities of the company.

The following Tab.2.2 is about the process structure about the income condition:

Tab.2.2 Structure of income statement

Income Statement:
operating revenues
operating expenses
Operating profit
financial income
financial expenses
other financial items
Net financial items
Profit before tax
tax expense
Net profit

In the Tab.2.2, we can see there are two main parts calculated in the income statement, one is operating activity, the other is financing activity. Operating revenues are from sale of products, goods, and services, operating costs and expenses are costs associated with generating operating revenues (raw material consumption, electricity consumption, depreciations, costs of goods sold, salaries and wages paid to employees, administrative costs, other operating costs and so on). Financial revenues are interests received, revenues from owned securities such as dividends received, coupons received and so on. The financial costs are interests paid, coupons paid and so on.

And we should know, the sum of operating and financing income is equal to profit before taxes. The following formula shows how to calculate the tax (T), in other words, how the taxes are measured:

$$T = EBT \cdot t\,, \tag{2.3}$$

where EBT means earnings before tax and t means tax rate. Earnings before tax measure a company's financial performance. Its calculation is revenue minus expenses, excluding taxes. It shows company earnings with the cost of goods sold, interest, depreciation, general and administrative expenses, and other operating expenses deducted from gross sales.

The following formula shows the difference between earnings after tax and earnings before tax, because earnings after tax (EAT) is deducted from the tax:

$$EAT = EBT - T\,, \tag{2.4}$$

where EBT means earnings before tax and T means tax.

2.1.3 Cash flow statement

Cash flow statement (CF statement) reflects the source of cash inflows and directions of cash outflows, it shows the cash flows' conditions of one company. And it mainly describes the cash flows of the operating activities, investing activities and financing activities of the company. And the following formula just reflects the activity compositions of cash flows:

$$Net\ CF = CF\ from\ OA + CF\ from\ IA + CF\ from\ FA, \tag{2.5}$$

where *OA* are operating activities, *IA* are investing activities and *FA* are financial activities.

These three of activities are important for company, so it is very essential to calculate the cash flows of these activities accurately. The following one shows the balance of cash flows:

$$End\ balance\ of\ cash = Beginning\ balance\ of\ cash\ +/-\ Net\ cash\ flows. \tag{2.6}$$

The three parts in the cash flow statement in details, they are operating activities, investing activities and financing activities. The end of the balance of cash measures from the beginning of the cash and the adjustments of the net cash flows of the activities.

As the following Tab.2.3 introduces, there are three sources consisting of the cash flow statement. And the operating activities are mainly about the daily activities of inflows and outflows. If the company gains some incomes or other things, it will increase cash flows that is about inflows, otherwise, it will decrease the cash flows that is about outflows, such as expenses or other potential losses. The investment activity is mainly about the capital or other long-term assets, if it will invest to spend for the capital, which means the company will have the outflows. In the financing activities, the company has to have some financial plans for these activities. If necessary, the company has to pay dividends for the shareholders guaranteeing the rights and interests, which means outflows from the company. Certainly, the company can also gain cash inflows by raising money.

Tab.2.3 Structure of cash flow statement

Cash Flow Statement:
Operating activities
net income/loss
adjustments to net income/loss(depreciation…)
changes in liabilities
changes in inventories
changes in accounts receivables
changes in other operating activities
Investment activities
capital expenditures
Investments
other cash flows from investing activities
Financing activities
dividends paid
sale purchase of stock
net borrowings
other cash flows from financing activities
Total changes in cash flow

Cash flow (CF) from operating activities (OA):

The operating activities include all inflows and outflows associated with the day-to-day activities of a company. Generally, it includes all transactions that relate to the calculating of net income, the following formula reflects the concrete cash flows balance situation from operating activities:

$$\text{Net CF from OA=Operating inflows-Operating outflows.} \tag{2.7}$$

Cash flow (CF) from investing activities (IA):

Investing activities involve all inflows and outflows associated with purchasing and selling of long-term assets, for example, tangible assets, intangible assets, and financial investments. The following formula reflects the concrete cash flows balance situation from investing activities:

$$\text{Net CF from IA= Investing inflows - Investing outflows.} \tag{2.8}$$

Cash flow (CF) from financing activities (FA):

Financing activities involve all inflows and outflows from transactions between company and its owners and creditors. The following formula reflects the concrete cash flows balance situation from financing activities:

$$\textit{Net CF from FA} = \textit{Financing inflows} - \textit{Financing outflows}. \quad (2.9)$$

2.2 Common-size analysis

The common-size analysis is to analyze data by observing these financial statements and their changes to identify the trends and major differences over the time. And it is necessary to adopt the common-size analysis approach to know more about the financial situations of the company. Common-size analysis is a method of comparing either financial statements of different-sized companies or financial statements of one company from different time periods.

It is mainly made up of two parts: vertical common-size analysis and horizontal common-size analysis.

2.2.1 Vertical common-size analysis

Vertical common-size analysis is the analysis of these changes in the proportions of selected benchmarks (total revenues, total assets, total liabilities, etc.). It shows each item on a statement as a percentage of a base figure within the statement. Vertical analysis generally refers to the enterprise in different times of the index changes and reasons.

On the one hand, adopt a vertical analysis of balance sheet, the total of assets and the total of liabilities and stockholders' equity are generally used as base figures. For example, if the object is about the assets, the all individual assets are shown as a percentage of total assets. And the current liabilities, long term debts and equities are shown as a percentage of the total liabilities and stockholders' equity separately. On the other hand, use the vertical analysis of income statement, revenues are generally used as the base and all other component items of income statement such as cost of goods sold, operating expenses, income before tax, and net profits etc. are as a percentage of the revenues.

In the vertical analysis, the percentage is calculated by using the following formula, a vertical analysis needs an individual statement for a reporting period but comparative statements may be prepared to increase the usefulness of the analysis:

$$\%E = \frac{x_i}{\sum_n x_i} \cdot 100. \tag{2.10}$$

As the formula shows, we can analyze the company with the approach of vertical common-size analysis, we can choose total revenues as the base amount, then costs or other objects we research are showed as the percentage of total revenues.

2.2.2 Horizontal common-size analysis

The horizontal analysis is the way to analyze and compare the information of the company's financial conditions in the reporting period with the former period. It is very essential and helpful for the investors to know about the changes of the company in a certain period and the tendency of the company financial situations of developing. It is also important for companies to analyze and research the data, to understand the business conditions of their companies and make adjustments in time. The horizontal analysis asks to analyze the statements for more periods, the earliest period is usually regarded as the basic period, and the items on the statements for all later periods are compared with items on the statements of the basic period.

And there are two ways conducting horizontal analysis, one is absolutely comparison and the other is percentage comparison. The absolute change just points to the difference between the amounts. The relative change points to the relative change of the amounts we research, it is about the tendency of the object we analyze. The first one is about absolute change, the second one is about relative change:

$$\textit{Absolute change} = W_t - W_{t-1}. \tag{2.11}$$

$$\textit{Relative change} = \frac{W_t - W_{t-1}}{W_{t-1}} \cdot 100\%, \tag{2.12}$$

where the W_t is the value of selected item in actual period and W_{t-1} is the value of selected item before actual period.

2.3 Financial ratios

Financial ratio analysis can also be called financial indicator analysis. It is to calculate the relative ratios according to the relationship of two or more items in the financial statements. After calculating these financial ratios, we can know more about the details in finance of the company we research, such as the financial situations and the business results of the company. By using financial ratio analysis, we can compare the profits and risks between different companies, which can help the investors to make a right and optimal decision. Surely, the companies adopt the financial ratios, they can understand themselves better of the performance in the market of competition. And when using the financial ratio analysis, we should use the formulas to calculate the ratios. The items which we will use in the calculation process may include some financial objects we are familiar with, for instance, assets, equity, liabilities, revenues and so on. The financial ratios are calculated in the current years, and are compared with the previous years , different companies and so on, so they may provide the important indications to solve the business problems. Using the financial ratio analysis, we can find out and evaluate the enterprise's financial status and problems in operation in time.

We will introduce the financial ratios from five concepts. There are five groups of financial ratios: profitability ratios, liquidity ratios, solvency ratios, activity ratios and DuPont analysis. Profitability ratio is to analyze the company ́s ability to generate profit from invested capital. Liquidity ratio is to measure company ́s ability to convert into cash to pay off the short-term obligations. Solvency ratio is to measure company ́s ability to repay its obligations. Activity ratio is to measure the relative efficiency of a firm based on its usage of the resources, such as its assets, leverage, or other items. DuPont analysis uses the relationship between some important financial ratios to comprehensively analyze the financial situation of the enterprises.

2.3.1 Profitibility ratios

Profitability ratio is to measure the ability to return in the relative items, it is used to compare a company's ability to generate profits relative to its industry, or the same ratios can be compared within the same company for different periods. It is to calculate the rate of return by using the relative assets and controlling the relative expenses. It is both essential to the investors and companies.

Operating profit margin shows how many profits one company can have in the operating activities, it is still include the interest and taxes. Here is the specific formula of operating profit margin:

$$Operating\ profit\ margin = \frac{EBIT}{R},\ OR \tag{2.13}$$

$$Operating\ profit\ margin = \frac{Operating\ profit}{R} \tag{2.14}$$

where $EBIT$ means earnings before interests and taxes, and R is revenues.

Net profit margin (NPM) is a profitability ratio that measures the amount of net income earned of sales generated by comparing the net income and net sales of a company. It is the percentage of the net profit to the revenues. It is one of the most important indicators in the company's financial development. The following one is about the net profit margin:

$$NPM = \frac{EAT}{R}, \tag{2.15}$$

where EAT means earnings after tax and R means revenues.

Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives managers, investors, or analysts an indicator reference as to how efficient to a company's management is at using its assets to generate earnings. It evaluates the profitability of using the whole assets. The following formulas are to introduce the relationship between the profits and assets:

$$ROA = \frac{EBIT}{A},\ OR \tag{2.16}$$

$$ROA = \frac{Operating\ Profit}{A} \tag{2.17}$$

where the $EBIT$ means earnings before interests and taxes and A means assets.

Return on equity (ROE) measures the amount a company generates with the funds raised from shareholders' equity. It is relative to the equity, and we can know how well one company uses the investments to get the earnings. The following formula is about the return of equity:

$$ROE = \frac{EAT}{E}, \tag{2.18}$$

where EAT means earnings after tax and E means equity.

2.3.2 Liquidity ratios

Liquidity ratio measures company ́s ability to convert into cash to pay off its short-term liabilities and obligations. It is an important indicator to see the ability to pay off current debt obligations. Because it shows the availability of cash to pay debt, it is important for one enterprise when facing to pay the debt.

Current ratio is a liquidity ratio that measures a company's ability to pay short-term obligations. The current ratio is an indication of a firm's liquidity. It tells investors and analysts how a company can maximize the current assets on its balance sheet to satisfy its current debt. The following formula shows the comparing current assets to current liabilities:

$$Current\ ratio = \frac{Current\ Assets}{Current\ Liabilities}\ . \tag{2.19}$$

Quick ratio is an indicator of a company's short-term liquidity position and measures a company's ability to meet its short-term obligations with its most liquid assets. It measures the ability of a company to use its current cash or quick assets to pay off its current liabilities immediately:

$$Quick\ ratio = \frac{Current\ Assets - Inventories}{Current\ Liabilities},\ OR \tag{2.20}$$

$$Quick\ ratio = \frac{Cash + Accounts\ Receivable}{Current\ Liabilities}\ . \tag{2.21}$$

Cash ratio is the ratio of a company's total cash and cash equivalents to its current liabilities. It evaluates the company's ability to repay its short-term debt and measures how well current liabilities are covered by the cash flows generated from a company's operations. As the following one introduces, it is the ratio of cash and cash equivalents to the current liabilities:

$$Cash\ Ratio = \frac{Cash + Marketable\ Securities}{Cuurent\ Liabilities}\ . \tag{2.22}$$

2.3.3 Solvency ratios

Solvency ratio measures the company ́s ability to pay off its obligations. It can analyze the debt paying ability of enterprises, analyze the structure of corporate equity and so on. The ratio is lower, it shows better to default on the debts. Solvency ratio includes debt ratio, debt-to-equity ratio and interest coverage.

Debt ratio is the percentage of the company ́s assets is financed by the debt. The debt ratio is defined as the ratio of total debt to total assets, here shows the formula of debt ratio:

$$Debt\ Ratio = \frac{Total\ Debt}{Total\ Assets}\ . \tag{2.23}$$

Debt-to-equity ratio is calculated by dividing a company's total liabilities by its shareholder equity. The ratio is used to evaluate a company's financial leverage. It is a measure of the degree to which a company is financing its operations through debt. As the following formula shows, it indicates the relative proportion of shareholders' equity and debt used to finance a company's assets, the amount of the company΄s debt relative to company΄s equity :

$$Debt\ to\ Equity = \frac{Total\ Debt}{Total\ Equity}\ . \tag{2.24}$$

Interest coverage is a debt ratio and profitability ratio used to determine how easily a company can cover the interest payments with its earnings. In other words, the interest coverage ratio can be calculated by dividing a company's earnings before interest and taxes during a given period by the company's interest payments. The investors, debtors, creditors can use the formula to know the level of the riskiness of one company:

$$Interest\ Coverage = \frac{EBIT}{Interest\ Paid}\ ,OR \tag{2.25}$$

$$Interest\ Coverage = \frac{Operating\ Profit}{Interest\ Paid}\ . \tag{2.26}$$

where $EBIT$ means earnings before interest and taxes.

2.3.4 Activity ratios

Activity ratio measures the relative efficiency of a firm based on its use of the resources, for example, its assets, leverage, or other balance sheet items, and it is important to determine whether a company's management is good or optimal to generate revenues and cash from its resources. Activity ratio is also commonly known as efficiency ratio.

Average collection period (ACP) is the amount of time it takes for a business to receive payments owed in terms of accounts receivable. And reducing period of time is an indicator of increasing efficiency. The following formula shows the shorter the average collection period is, the more beneficial and profitable to the company, because it can get the money they should have more quickly:

$$Average\ collection\ period = \frac{Accountts\ Receivable}{Revenues} \cdot 360. \tag{2.27}$$

Accounts receivable turnover (ART) measures the effectiveness to collect accounts receivable, a company's ability to collect money from its customers. As the formula introduces, a low ratio suggests a deficiency in the collection process, on the contrary, a high accounts receivable turnover, shows the efficiency of the company collecting accounts receivable:

$$Accounts\ Receivable\ Turnover = \frac{Revenues}{Accounts\ Receivable}\ . \tag{2.28}$$

Inventory turnover (IT) is a ratio showing the times a company has sold and replaced inventory during a given period. As we know, it is a normal phenomenon for a company to have inventories, but as the following formula shows, the less inventory, it will have a higher inventory turnover for one company:

$$Inventory\ Turnover = \frac{Costs\ of\ Goods\ Sold}{Average\ Inventory}\ . \tag{2.29}$$

Total assets turnover (TAT) measures how efficiently a company uses its assets to become the revenues. As we can see from the following formula, the higher of the total assets turnover is, the more beneficial and efficient for the company, but if contrary, it means the company is harder to make the assets to generate the sales:

$$Total\ Assets\ Turnover = \frac{Revenues}{Total\ Assets}\ . \tag{2.30}$$

2.3.5 DuPont analysis

DuPont analysis is to decompose the return on equity of enterprises into multiple financial ratios step by step, which is helpful for deeply analysis and comparison of business performance. Because this kind of analysis method is used by American DuPont company at first, and then is called DuPont analysis method. The most remarkable feature of DuPont model is that it organically combines several ratios used to evaluate the operating efficiency and financial status of enterprises according to their internal relations to form a complete index system, which is finally comprehensively reflected by the return on equity. The formula of ROE is:

$$ROE = \frac{EAT}{Equity} = \frac{EAT}{Revenues} \cdot \frac{Revenues}{Total\ Assets} \cdot \frac{Total\ Assets}{Equity}, \tag{2.31}$$

where *EAT/Revenues* means net profit margin, *Revenues/Total Assets* means assets turnover, *Total Assets/Equity* means financial leverage.

DuPont analysis is the fundamental example of the pyramidal decomposition by three component ratios. If separate the effects of taxes and interest, we can decompose the profit margin as the following formula:

$$\frac{EAT}{Revenues} = \frac{EAT}{EBT} \cdot \frac{EBT}{EBIT} \cdot \frac{EBIT}{Revenues}, \qquad (2.32)$$

where *EAT / EBT* is tax burden, *EBT / EBIT* is interest burden, *EBIT / Revenues* is operating margin.

After substitution into DuPont analysis we can get the following formula:

$$ROE = \frac{EAT}{Equity} = \frac{EAT}{EBT} \cdot \frac{EBT}{EBIT} \cdot \frac{EBIT}{Revenues} \cdot \frac{Revenues}{Total\ assets} \cdot \frac{Total\ assets}{Equity}, \qquad (2.33)$$

which it can be into another form,

$$ROE = TB \cdot IB \cdot EBIT\ margin \cdot AT \cdot FL, \qquad (2.34)$$

where *TB* is tax burden, *IB* is interest burden, *EBIT* is earnings before interests and taxes, *AT* is assets turnover, *FL* is financial leverage.

Let's talk about the details of the influence quantification, to analyze indicators, their change have caused changes in the basic ratio, to research how the component ratios contribute to the changes in basic ratio. There are four methods about the influence quantification, method of gradual changes, logarithmic decomposition method, functional decomposition method, integral decomposition method.

Method of gradual changes are about the absolute changes in component ratios. The number of the component ratios is equal to the number of equations for influence quantification, the strength is to be applied regardless of positive or negative values in component ratio or basic ratio. But the weakness is to order in decomposition can influence the results. In the case of decomposition, it is with 3 component ratios to analyze the gradual changes:

$$\begin{aligned} \Delta\, xa_1 &= \Delta a_1 \cdot a_{2,0} \cdot a_{3,0}, \\ \Delta\, xa_2 &= a_{1,1} \cdot \Delta a_2 \cdot a_{3,0}, \\ \Delta\, xa_3 &= a_{1,1} \cdot a_{2,1} \cdot \Delta a_3, \end{aligned} \qquad (2.35)$$

where x is basic ratio, $\Delta\, x$ is absolute change in the basic ratio, a is component ratio, $\Delta\, a$ is absolute change in the component ratio, $\Delta\, xa_1$ is absolute change in the basic ratio caused by the change in the first component ratio.

Logarithmic decomposition method has its advantage, is to need just one formula for the impact quantification regardless of how many component ratios we have. And the logarithmic decomposition method formula as follows:

$$\Delta xa_i = \frac{lnIa_i}{lnI_x} \cdot \Delta x\,, \tag{2.36}$$

where x is basic ratio, Δx is absolute change in the basic ratio, $I_x=\frac{x_1}{x_0}$ is index of change in basic ratio, $I_a=\frac{a_{i,1.}}{a_{i,0.}}$ is the index of change in component ratio.

Functional decomposition method is with the relative changes in basic and component ratios.

$$\Delta x^{relat.}=Rx=\frac{x_1-x_0}{x_0}, \tag{2.37}$$

$$\Delta a_i^{relat.}=Ra_i=\frac{a_1-a_0}{a_0}. \qquad (2,38)$$

The influence of component ratio on the basic ratio as shown below:

$$\begin{aligned} \Delta X\, a_1 &= \frac{1}{Rx} \cdot Ra_1 \cdot (1+\frac{1}{2} \cdot Ra_2+\frac{1}{2} \cdot Ra_3+\frac{1}{3} \cdot Ra_2 \cdot Ra_3) \cdot \Delta X\,, \\ \Delta X\, a_2 &= \frac{1}{Rx} \cdot Ra_2 \cdot (1+\frac{1}{2} \cdot Ra_1+\frac{1}{2} \cdot Ra_3+\frac{1}{3} \cdot Ra_1 \cdot Ra_3) \cdot \Delta X\,, \\ \Delta X\, a_3 &= \frac{1}{Rx} \cdot Ra_3 \cdot (1+\frac{1}{2} \cdot Ra_1+\frac{1}{2} \cdot Ra_2+\frac{1}{3} \cdot Ra_1 \cdot Ra_2) \cdot \Delta X\,. \end{aligned} \tag{2.39}$$

Integral decomposition method, the procedure is similar as functional method, in the case of decomposition with three component ratios:

$$\Delta X\, a_n = \frac{Ra_n}{Rx} \cdot \Delta X\,, \tag{2.40}$$

$$\mathrm{Rx}=\textstyle\sum_{j=1}^{N} Ra_j\,. \tag{2.41}$$

And the influence of component ratio is given as the following of it:

$$\Delta X\, a_j=\frac{Ra_j}{Rx} \cdot \Delta X\,. \tag{2.42}$$

3 Financial Characteristics of Prada Company

In this chapter, we will introduce the financial characteristics of PRADA company. As we all know, financial characteristics of one company can reflect the company's financial situation continuously. Therefore, analyzing and understanding the company's financial characteristics is very important and necessary by using some approaches of financial analysis to a company. And we will mainly emphasize two parts: the introduction of PRADA company, such as the history, brands, production, specific strategy and competition condition of Prada and so on. Then the next step is the common-size analysis of PRADA company.

3.1 Introduction of Prada company

In this part, we will introduce some basic information about PRADA, which is mainly about three aspects : history, business information and competition.

"For over a century, the values of passion, quality and attention towards details have been the driving force of every activity of the Group and have been preserved and handed down to future generations, day after day. The relentless quest for excellence, where the human factor is a vital element, has inspired the choices and initiatives of the Prada Group. Every new project represents the opportunity to push the boundaries of the ordinary and explored solutions." [1]

During the hundred years mainly about one century, the company promotes to product high quality goods by researching and innovating. And this kind of operating strategy has promoted the success of the company. And as is known to us all, PRADA has become one of the world's most famous luxury brands. And the subsidiary corporations of PRADA have expanded to all over the world. Innovation is the main goal shared by the company, its collaborators and suppliers and is based on a continuous teamwork in which test and research lead to the excellent development of the company.

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[1] Source: PRADA,https://www.pradagroup.com/en/group/history.html

3.1.1 History of Prada company

PRADA is an Italian luxury brand founded by Mario PRADA in Milan, Italy in 1913. The fashionable and high-quality handbags, sunglasses, leather products, makeup boxes and other products designed by the founder Mario Prada, and have been favored and gone after by royalty and the upper class.

In 1978, this famous brand with a long history was endowed with new development fashion elements and vitality. The granddaughter of PRADA's founder, Miuccia Prada has unique talent in new ideas, which combines the curiosity of knowledge and culture, thus opening up the door for pioneers. She formed a business partnership with another famous production company which had comprehensive experience in luxury products at the time. The partner company not only established the PRADA worldwide product distribution channels, and batch production system, combining the traditional concepts with modern technology.

During the 1980s and 1990s, PRADA's sales volume hit new highs. PRADA shoes series and men's and women's clothing series also came out successively during this period, and became one of the key products of the group.

Nowadays, PRADA provides full ranges of production and development, offering men's and women's clothing, leather goods, shoes, eyeglasses and perfumes, as well as tailored services. Recently, flagship stores of PRADA have been set up with a unique style, which is a new attempt to integrate shopping with culture. At present, PRADA group has owned such renowned international brands as PRADA. There are many boutiques of PRADA around the world now, and PRADA group has many famous subordinate brands.

3.1.2 Basic business information of Prada

The basic information of PRADA will be introduced into four parts: employees, industry activities, group logistics, and sales strategy, and the competition in the market. Through knowing and understanding of these basic business information of the company, we will know the main factors of the company’s financial situation. It will be very important and meaningful to our next financial analysis of the company.

Employees

In any company, the staff is the most important section, because people are the driving force of the company. Employees are an essential source of making revenues and a fundamental strategic factor for the competitiveness in a global market. PRADA group is committed to respecting personal characteristics and minds, developing incorporate cultures to company practices, making the PRADA group a globalized business. The passion, skills and intellectual curiosity of each person lead the group developing very well in all its activities. The uniqueness of its heritage and the various abilities over these years make every process to be performed with great commitment and hard work. In the luxury design process, the skillful hands of the artisans and innovative performances take on a leading role.

Industry activities

The group's products are manufactured in 21 company-owned sites, 18 of which are located in Italy, left in other countries and by a network of long-standing and highly experienced contractors. Each production process is directly monitored and controlled by PRADA: to the selection to the purchase of raw materials, to the design of models, to the planning and coordination of internal and outsourced production manufacturing processes.

Group logistics

The PRADA group deploys logistics services through five central warehousing facilities to complete product distribution. Four of the five warehouses are in Italy and one in the UK and are managed by the group's internal shipping agency. The logistics department is responsible for monitoring and receiving the products from the group's industrial network, ensuring the smooth transportation of the products in the whole process from the warehouse to the final delivery place, realizing the aim of the automatic tracking of the products by computers, and conducting quality control through specific mechanisms.

Sales strategy

These brands belonging to PRADA group are sold through two distribution channels: one is retail channels, represented by single-brand stores directly operated by the company, the other is wholesale sales, a separate channel consisting of multi-brand stores or franchises. With this distribution solution, the group is able to sell products worldwide through single or multi-brand exclusive outlets. PRADA manages the sales channels of independent stores and department stores, aiming at improving excellent product quality and sales volume, ensuring the competitiveness of marketing and monitoring the sales performance.

3.1.3 Competition of Prada

As we know, PRADA is a luxury group, in the same industry, there are many competitors, such as Chanel, LV, Dior and so on. And we should analyze PRADA from different sides. On the one hand, PRADA has special design in the products and has leaded the fashion for a long time since it grew. PRADA is good in introducing new business models in the luxury industry, conducting great quality standards throughout the production chain, and continuously and strictly control the overall process. One of Prada's key attributes is its ability to innovate in all different kinds of areas.

As a pioneer in introducing new approaches into the retail network, PRADA is the first brand in the world to launch a new and revolutionary shop concept, namely the Prada focus shop. Later, the practice was followed by other big brands in the industry. The PRADA group seeks an economic growth linked to medium and long-term continuous development, contributing to the respect for people, environment, communities and artistic heritage. However, on the other hand, other competitors are equally strong. The old branch PRADA has obvious advantages in product and expansion strategy. But uncertainty about future growth remains high because the overall consumer interest is subdued. Without doubt, the cheap copies from small business also have influence on the sales and development on PRADA. So the company has to concentrate on these issues and solve them in time.

3.2 Common-size analysis of Prada Company

In this section, we will use the approach of the vertical common-size and horizontal common-size analysis to analyze the PRADA company’s financial situation according to the financial reports from the company since 2013 to 2017.

Tab.3.1Balance sheet of PRADA from 2013 to 2017(thousand €)

	2013	2014	2015	2016	2017
Non-current assets	1,997,830	2,426,696	2,838,922	2,868,117	2,846,886
Current assets	1,387,449	1,461,596	1,899,955	1,888,438	1,810,043
Total assets	**3,385,279**	**3,888,292**	**4,738,877**	**4,756,555**	**4,656,929**
Non-current liabilities	312,725	480,277	605,705	867,359	915,624
Current liabilities	742,062	706,475	1,115,025	791,819	636,775
Total liabilities	**1,054,787**	**1,186,752**	**1,720,730**	**1,659,178**	**1,552,399**
Equity	**2,330,492**	**2,701,540**	**3,018,147**	**3,097,377**	**3,104,530**
Total equity and liabilities	**3,385,279**	**3,888,292**	**4,738,877**	**4,756,555**	**4,656,929**

As the data is shown in the Tab.3.1, there are about the assets, liabilities and equity. The total assets of PRADA have the tendency to increase within the recent years. However, with the assets increasing, the liabilities are also increasing. The non-current liabilities have increased year by year. As for the current liabilities, they grow in the former years, but they have significant decline in the latter years. And the current liabilities are much higher than long-term liabilities. And the equity has increased very quickly, although it tends to increase slightly of € 3,097.377 million to € 3,104.530 million from 2016 to 2017.

The following Tab.3.2 is about the income statement of PRADA in the recent years:

Tab.3.2 Income statement of PRADA from 2013 to 2017(thousand €)

	2013	2014	2015	2016	2017
Net revenues	3,297,219	3,587,347	3,551,696	3,547,771	3,184,069
Costs of goods sold	-920,678	-938,698	-1,001,117	-980,206	-894,957
Gross margin	**2,376,541**	**2,648,649**	**2,550,579**	**2,567,565**	**2,289,112**
Operating expenses	-1,486,760	-1,709,412	-1,849,028	-2,064,672	-1,857,931
EBIT	**889,781**	**939,237**	**701,551**	**502,893**	**431,181**
Other expenses	-6,165	-16,341	-33,849	-27,561	-15,751
Income before taxes	**883,616**	**922,896**	**667,702**	**475,332**	**415,430**
Taxation	-250,339	-285,091	-208,484	-141,994	-131,240
Net profits	**633,277**	**637,805**	**459,218**	**333,338**	**284,190**

As is shown in the Tab.3.2, the revenues of PRADA have increased conspicuously from 2013 to 2016. The revenues have decreased although in 2017, but still with a huge number of € 3,184.069 million. And we can see, the expenses are increasing very fast, so lead to the incomes before taxes have a tendency to go down. However, the taxation has a tendency to decline, but because of the large base of the incomes before tax decreasing deeply, the net profits go down very obviously. However, we can know the net profits are very high with € 637.805 million in 2014, because the revenues in 2014 have the highest amount with € 3,587.347 million than other recent years. Therefore, it leads to the gross margin is the biggest with € 2,648.649 million. Although the expenses are increasing from 2013 to 2014, the tendency is not very apparent. Thus we can see the net profits are still the highest in 2014. But we can see the net profits are decreasing very fast, only € 459.218 million since 2015. The main reason of 2015 and 2016 is that the expenses especially operating expenses are going up very quickly. And the reason of 2017 decreasing to € 284.190 million is that the revenues in this year are just declining to € 3184.069 million, which show the attraction of sales to customers is decreasing in 2017, so the company needs to adopt optimal sales strategy and better service to promote the sales revenues recovering again.

3.2.1 Vertical common-size analysis of Prada

In this section, we will adopt the vertical common-size analysis to analyze the financial situation of PRADA. There are some main processes to conduct the vertical common-size analysis. Firstly, we need to look for some benchmarks, for example, in the balance sheet, we can use total assets, total liabilities and equity as the benchmarks we research, in the income statement, we can choose the total revenues and total expenses as the benchmarks we analyze. Secondly, we need to calculate proportion of every item in the benchmarks. Lastly, we will compare these items according to the time and get some effective conclusions.

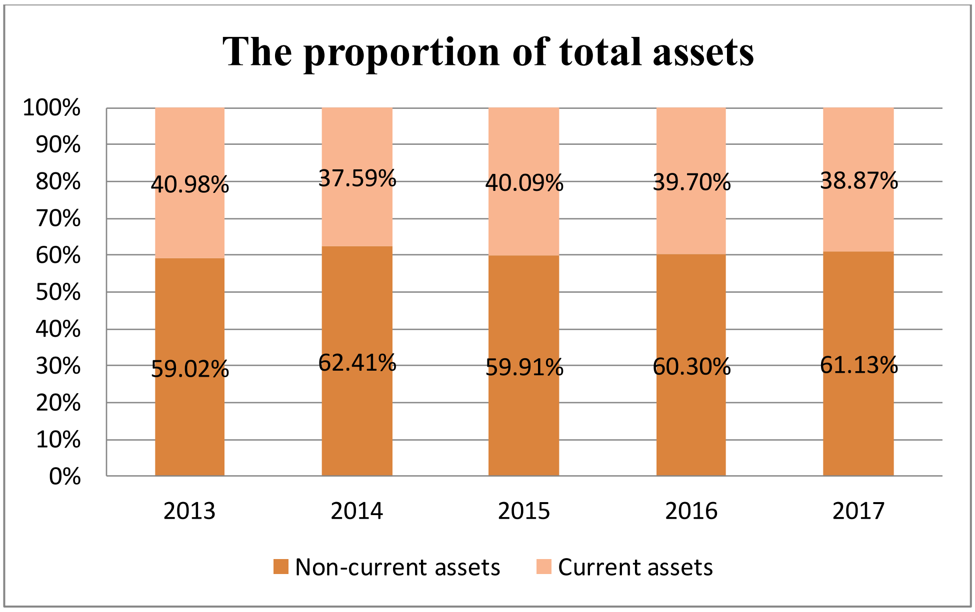
We will choose the total assets as the benchmark we research, and analyze the items of the assets. So we can get the following Tab.3.3, which shows the proportion of each item in total assets. And we also get Chart.3.1, which shows the percentage of the non-current assets and current assets to the total assets.

Tab.3.3 The proportion of each item in total assets of PRADA from 2013 to 2017 (%)

	2013	2014	2015	2016	2017
Non-current assets	**59.02**	**62.41**	**59.91**	**60.30**	**61.13**
Property, plant and equipment	25.32	31.64	31.11	31.91	33.13
Intangible assets	25.96	23.18	19.91	19.60	19.79
Associated undertakings	0.68	0.54	0.64	0.36	0.25
Deferred tax assets	5.20	5.18	5.93	5.90	5.31
Other non-current assets	1.82	1.80	1.93	2.40	2.65
Derivative financial instruments	0.03	0.04	0.02	0.02	0
Receivables and prepayments-non current	0.00	0.04	0.37	0.12	0
Current assets	**40.98**	**37.59**	**40.09**	**39.70**	**38.87**
Cash and cash equivalents	16.89	14.62	14.96	14.31	15.51
Trade receivables, net	9.00	7.93	7.31	5.34	6.13
Inventories	10.16	11.57	13.81	14.56	11.32
Derivative financial instruments-current	1.27	0.36	0.13	0.25	0.15
Receivables and prepayments-current	0.58	0.15	0.07	0.41	0.32
Other current assets	3.10	2.95	3.81	4.83	5.44
Total assets	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

And the following Chart.3.1, describing the relative proportion of the non-current assets and current assets to the total assets, it is more clearly to use the chart to show.

Chart.3.1 Vertical common-size analysis of assets of PRADA from 2013 to 2017



We can see from the Tab.3.3 and Chart.3.1, they are about the PRADA financial items from 2013 to 2017. As we see, the current assets and non-current assets have very stable proportion from 2013 to 2017. And the proportion of non-current assets is very high to total assets although there is an extremely small fluctuation, especially in 2014 with 62.41% and in 2017 with 61.13%. As the Tab.3.3 shows, the intangible assets increased quickly, which made the non-current assets very high. And in 2014 and 2017, we can see the property, plant and equipment grew hugely. We can know there is a stable development trend in the recent years in PRADA. However, as we know, if one company has higher percentage of current assets, it is better for the company when face to the risks, because it can convert these assets into cash to deal with the financial problems faster. But it does not mean that more current assets are good, because current assets are relative to current liabilities, if current liabilities have a high proportion, it is no need to have a higher current assets, either. Therefore, it is optimal to keep a good proportion of non-current assets and current assets. But PRADA can develop better if can reduce non-current assets appropriately. Of course, we have noticed that there is no derivative financial instruments or receivables, advance payments, related parties of non-current aspects, the main reason is that it is very close to the present time and the structure of non-current concrete structure has quietly changed a little.

As we know, if the proportion of no-current assets is high, then the proportion of current assets is relatively to be low. So from 2015 to 2017, we can see from the Tab.3.3 and Chart.3.1, there was a significant decrease in the proportion from 40.09% to 38.87%. So we should analyze further in details, as the years go on, there was a decrease of the proportion in the cash and cash equivalents. And the decline proportion of trade receivables was particularly pronounced, which means the items of payments have been collected by the company that is more beneficial to PRADA. However, we can see the percentage of inventories has increased with the time going on. So the company should pay more attention to the problem, PRADA has to think of some helpful advice to solve these inventories, they can make a good and reasonable production plan, increase the intensity and frequency of information collection, it is also appropriate to expand marketing sale channels, irregularly check inventory and strengthen the cleaning and management, of course, it is necessary to set a reasonable sales price to meet the needs of the market. As is known to us all, PRADA is a luxury brand, so it is common that seasonal commodities will appear, such as clothes, shoes and so on, so it is very important to strengthen effective management and goods safety protection. And we can see from the Tab.3.3, the derivative financial instruments in current aspects has a very small proportion, and in 2013, it is over 1%, but in the later years, they are all less than 0.4%, to some extent, it can reduce the risk of the enterprise. It is obvious that there is an apparent increase in other current assets especially in 2017.

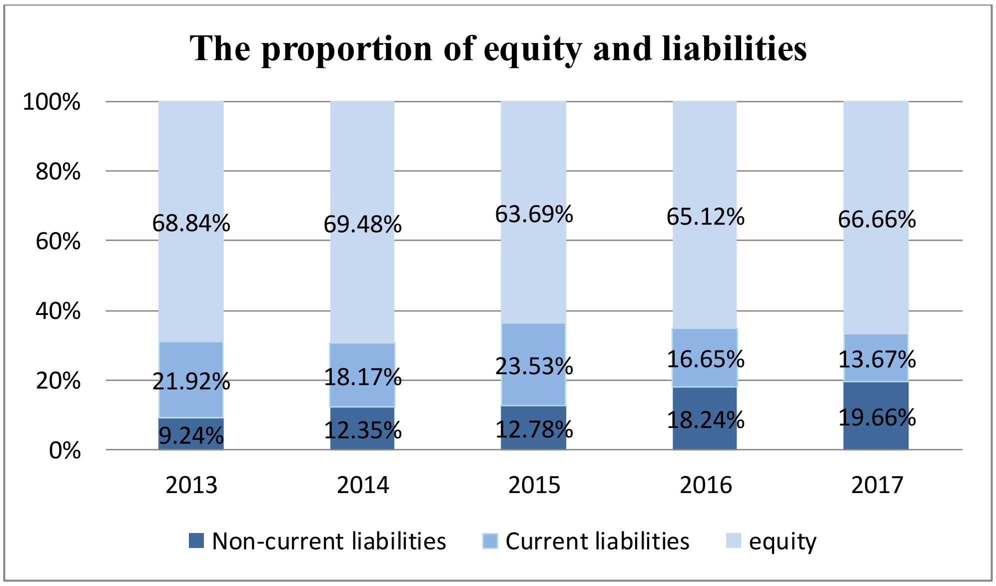
We have analyzed the assets more detailed, the non-current asset always has a higher proportion than the current asset, which further explains it is more beneficial for PRADA to gain profits from non-current assets in the long run of development.

And then we will use the liabilities and equity as our benchmark to adopt vertical analysis, and the following Tab.3.4 and Chart.3.2 will show the more details and are helpful to research the company more comprehensive.

Tab.3.4 The proportion of each item in total equity and liabilities of PRADA from 2013 to 2017(%)

	2013	2014	2015	2016	2017
Non-current liabilities	9.24	12.35	12.78	18.24	19.66
Current liabilities	21.92	18.17	23.53	16.65	13.67
Total liabilities	**31.16**	**30.52**	**36.31**	**34.88**	**33.34**
Total equity	**68.84**	**69.48**	**63.69**	**65.12**	**66.66**
Total equity and liabilities	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Chart.3.2 Vertical common-size analysis of equity and liabilities of PRADA from 2013 to 2017



From the Tab.3.4 and Chart.3.2, we can see the equity has a high percentage, and the tendency is relatively stable. The reason of equity with a high proportion is that equity belongs to the capital, it is more favorable for any company to have more equity. Of course, the equity has a stable percentage ranging from 63% to 70%, which means the total liabilities are also in a relatively balanced proportion. And in the recent years, with time going on, the proportion of non-current liabilities has risen quickly. And we can see the current liabilities range from 13% to 24%. It shows that current risks are correspondingly reducing, and the non-current risks are relatively increasing. And we can see from the Tab.3.4, the current liabilities with 23.53% in 2015, because the current liabilities grow fast and it is a relatively greater proportion than other years, so it leads to the total liabilities in 2015 has the highest percentage with 36.31% in the recent years. But in 2017, we can see the current liabilities are just accounting for 13.67%, because it is mainly the short-term loans from banks are decreasing very significantly. So PRADA may have concentrated on the issue, and adjusted it in time. So it can repay these liabilities to reduce the proportion of current liabilities, and can enlarge the scale of equity capital. To some extent, it can increase non-current liabilities to replace part of the current liabilities. Therefore, it is very essential for any company to decrease the proportion of liabilities and take the methods to control them.

And then we will adopt the revenues as our benchmark to conduct the vertical analysis. The following Tab.3.5 will help us to know more information and situations of the company.

Tab.3.5 The proportion of each item in total revenues of PRADA from 2013 to 2017(%)

	2013	2014	2015	2016	2017
Net revenues	100.00	100.00	100.00	100.00	100.00
Costs of goods sold	27.92	26.17	28.19	27.63	28.11
Gross margin	**72.08**	**73.83**	**71.81**	**72.37**	**71.89**
Operating expenses	45.09	47.65	52.06	58.20	58.35
EBIT	**26.99**	**26.18**	**19.75**	**14.17**	**13.54**
Other expenses	0.19	0.46	0.95	0.78	0.49
Income before taxes	**26.80**	**25.73**	**18.80**	**13.40**	**13.05**
Taxation	7.59	7.95	5.87	4.00	4.12
Net profits	**19.21**	**17.78**	**12.93**	**9.40**	**8.93**

From the Tab.3.5, we can know with the years go on, the tendency of net profits are decreasing from 19.21% to 8.93%, but we can see the costs and expenses go up, and then we can also analyze that there is intense competition in the luxury industry. Although the proportion is decreasing, it doesn’t mean that the amounts of the profits are also declining. And we can see the other expenses have unstable proportion ranging from 0.19% to 0.95%, so the company should care about them, and keep other costs in check. At the same time, we can see the proportion of taxation has gone down to just 4%, it shows the tax structure of levying to this industry has been adjusted. Surely, the other important reason, it is that the income before taxes has a lower percentage decreasing from 26.8% to 13.5% with years go on. And we can see, the earnings before interests and taxes, in other words, it is operating profits, in the 2013 and 2014 both have a relatively high proportion over 26%. It explains the company has a good development during the two years. After that, it went down a little bit. The main reason is the proportion of operating costs and expenses is rising in the later years.

Therefore, analyze these data by using the vertical common-size, we can see the proportion of the items more clearly, and we know about the recent years, the net profit has a lower percentage, thus the company should be aware of this problem, make strategic adjustments to increase the profits in time. These changes in proportions can tell some issues, so in the luxury industry, it is very important to concentrate on innovation. We can pay attention to the quality, at the same time, we can reduce costs and expenses appropriately, and reduce the waste of resources.

3.2.2 Horizontal common-size analysis of Prada

Last section, we used the vertical common-size analysis to research the proportion of the items from 2013 to 2017. And now we adopt horizontal common-size analysis to choose some benchmarks in the given period of the time, and then we will conduct the absolute changes and relative changes of these items. Finally, we will compare these changes, and analyze the financial situations of PRADA, it can help us know the company financial conditions and performance better.

At first, we analyze the absolute changes and relative changes of the items in the balance sheet. The Tab.3.6 shows the absolute changes in balance sheet, the Tab.3.7 shows the relative changes in balance sheet.

Tab.3.6 Absolute change of each item in balance sheet of PRADA (thousand €)

	2013/2014	2014/2015	2015/2016	2016/2017
Non-current assets	428,866	412,226	29,195	-21,231
Current assets	74,147	438,359	-11,517	-78,395
Total assets	**503,013**	**850,585**	**17,678**	**-99,626**
Non-current liabilities	167,552	125,428	261,654	48,265
Current liabilities	-35,587	408,550	-323,206	-155,044
Total liabilities	**131,965**	**533,978**	**-61,552**	**-106,779**
Equity	**371,048**	**316,607**	**79,230**	**7,153**
Total equity and liabilities	**503,013**	**850,585**	**17,678**	**-99,626**

From the Tab.3.6, we can see the numbers changing very directly. If absolute change is the positive number to the assets, it shows it grows in the next year. On the contrary, if it is negative number to the assets, it explains it declines in the next year. We can see from the Tab.3.6, the assets have been tremendous growth from 2013 to 2016, but the speed of growing is gradually slowing, the absolute change from € 503.013 million to € 17.678 million. However, in 2017, the assets have a significant decline just with a negative number of decreasing € 99.626 million, and the non-current assets of declining € 21.231 million and current assets of declining € 78.395 million, it shows there are major adjustments in the structure of assets in 2017. As for the liabilities, the total liabilities have increased from 2014 to 2015, but in the later years, they are decreasing from 2016 to 2017, the main reason is the current liabilities decline in the later years. It shows it is beneficial for the company, because some of the short-term loans or borrowings have been paid, and the debt burden is reducing. And the equity is increasing in the recent years, especially from 2013 to 2014, up to € 371.048 million, although the speed of rising has slowed. Because equity is capital, it is good for a company to have more equity. And we can see, in the recent years, just in 2015, the current liabilities increased, and increasing by € 408.550 million. It shows PRADA expands the scale of the group, and occupies large funds.

The following Tab.3.7 is about the relative change of each item in balance sheet of PRADA from 2013 to 2017:

Tab.3.7 Relative change of each item in balance sheet of PRADA (%)

	2013/2014	2014/2015	2015/2016	2016/2017
Non-current assets	21.47	16.99	1.03	-0.74
Current assets	5.34	29.99	-0.61	-4.15
Total assets	14.86	21.88	0.37	-2.09
Non-current liabilities	53.58	26.12	43.20	5.56
Current liabilities	-4.80	57.83	-28.99	-19.58
Total liabilities	12.51	44.99	-3.58	-6.44
Equity	15.92	11.72	2.63	0.23
Total equity and liabilities	14.86	21.88	0.37	-2.09

From the Tab.3.7, we can see the relative change in balance sheet, it shows the tendency more clearly. We can know, from 2014 to 2015, the assets, liabilities and equity are all increasing very fast. So we can know about PRADA is enlarging its group scale especially in 2015. From 2016 to 2017, the current assets have a distinct downward trend with decreasing from 0.61% to 4.15%. And because the current liabilities have declined obviously especially in 2016 with the minus 28.99%, it leads to the total liabilities declining. Especially in 2017, the total assets and total liabilities have a decreasing trend, they are apart minus 2.09% and minus 6.44%. And we can see, the non-current liabilities are increasing 5.56% in 2017, but because the current liabilities are decreasing 19.58%, so they result in the total liabilities are going down very distinctly from 2016 to 2017. And it shows there is a change and adjustment of structure in 2017.

And then we will analyze absolute and relative changes of items in the income statement. The Tab.3.8 shows the absolute changes in income statement, the Tab.3.9 shows the relative changes in income statement.

Tab.3.8 Absolute change of each item in income statement of PRADA (thousand €)

	2013/2014	2014/2015	2015/2016	2016/2017
Net revenues	290,128	-35,651	-3,925	-363,702
Costs of goods sold	-18,020	-62,419	20,911	85,249
Gross margin	**272,108**	**-98,070**	**16,986**	**-278,453**
Operating expenses	-222,652	-139,616	-215,644	206,741
EBIT	**49,456**	**-237,686**	**-198,658**	**-71,712**
Other expenses	-10,176	-17,508	6,288	11,810
Income before taxes	**39,280**	**-255,194**	**-192,370**	**-59,902**
Taxation	-34,752	76,607	66,490	10,754
Net profits	**4,528**	**-178,587**	**-125,880**	**-49,148**

Tab.3.9 Relative change of each item in income statement of PRADA (%)

	2013/2014	2014/2015	2015/2016	2016/2017
Net revenues	8.80	-0.99	-0.11	-10.25
Costs of goods sold	1.96	6.65	-2.09	-8.70
Gross margin	**11.45**	**-3.70**	**0.67**	**-10.85**
Operating expenses	14.98	8.17	11.66	-10.01
EBIT	**5.56**	**-25.31**	**-28.32**	**-14.26**
Other expenses	165.06	107.14	-18.58	2.48
Income before taxes	**4.45**	**-27.65**	**-28.81**	**-12.60**
Taxation	13.88	-26.87	-31.89	-7.57
Net profits	**0.72**	**-28.00**	**-27.41**	**-14.74**

We can see from the Tab.3.8, in the recent years, especially since 2015, the net revenues are decreasing evidently with € 35.651 million, however, we should know, the net revenues still very large. And the costs of goods have the tendency of decreasing € 20.911 million since 2016, which shows the company tries the best to reduce costs and expenses. But we can see that other expenses have the tendency to fluctuate, first up with increasing over € 17.000 million and then down with decreasing € 11.810 million. It suggests that the company uses ways to reduce costs and expenses, to achieve the aim of increasing net incomes. At the same time, we can find the taxes are going down, it indicates the tax structure has been adjusted. Finally, we can see the net profits are declining year by year. And this should cause PRADA to attach great importance, take all kinds of effective and reasonable methods to increase profits, at the same time, the company ought to control costs and expenditures.

And we can see from the Tab.3.9, it is about the relative changes, so we can research the change of tendency. In 2014, revenues have a faster growth with 8.8% than 2013, although in 2015 and 2016, revenues had a small drop but not decreasing over 1%, but the amount was still large. But in 2017, the net revenues had declined 10.25% distinctly. There is a fierce competition in the industry. As we know, PRADA is as a luxury group, there are many rivals of equal strength, constant innovation is especially important, and may be grabbed by other new products from the same industry. Besides, we can see the general trend is that net revenues and net incomes have the tendency to decrease since 2015. Therefore, with the economy recession, the company should come up with better strategies to boost sales and profits.

4 Financial Ratio Analysis of Prada Company

In this chapter, we conduct financial ratio analysis to research the financial data of PRADA more concretely, including profitability ratios, liquidity ratios, solvency ratios and activity ratios. And we will use DuPont analysis to analyze these data and the financial situations of the company. Lastly, we will get some summary of the company.

4.1 Profitability ratios of Prada company

As we have introduced in the chapter 2, we have described the theoretical knowledge of the financial ratios. So now we will use the profitability ratios to analyze these data from 2013 to 2017 we get from the PRADA anaual report, carry on further analysis and get some valid conclusions. In this aspect of profitability ratios, we will conduct from four specific parts, operating profit margin, net profit margin, return on assets and return on equity.

4.1.1 Operating profit margin

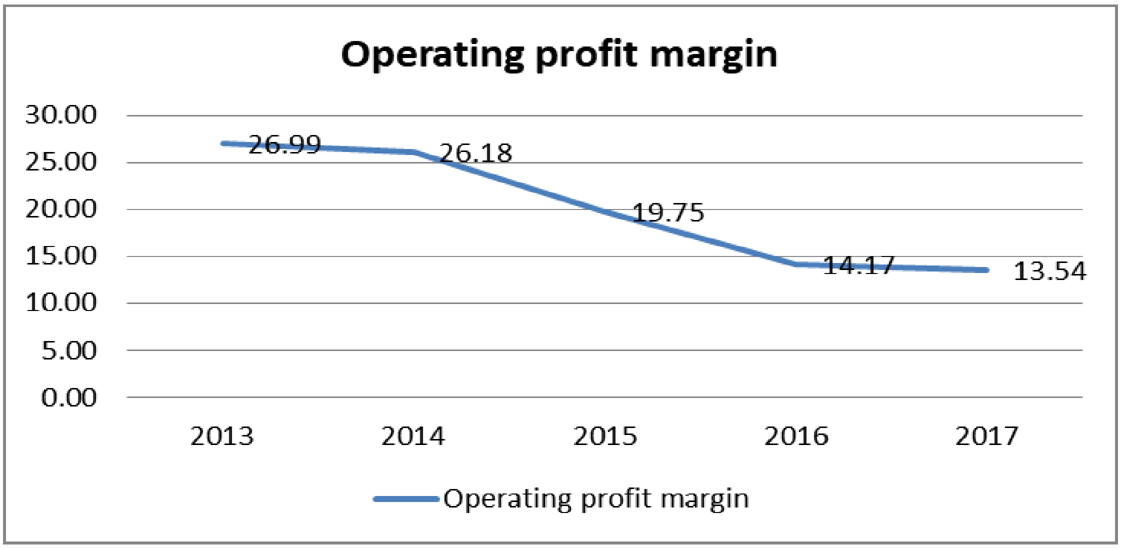
Operating profit margin shows how many profits one company can have in the operating activities. In other words, it is measured how much one company can make on the sales, deducting all kinds of costs of production in the operating activities, but before paying the interests and taxes.

The following Tab.4.1 and Chart.4.1 show the operating profit margin of PRADA from 2013 to 2017.

Tab.4.1 Operating profit margin of PRADA from 2013 to 2017(%)

	2013	2014	2015	2016	2017
EBIT	889,781	939,237	701,551	502,893	431,181
Revenues	3,297,219	3,587,347	3,551,696	3,547,771	3,184,069
Operating profit margin	**26.99**	**26.18**	**19.75**	**14.17**	**13.54**

Chart.4.1 Trend of operating profit margin of PRADA from 2013 to 2017(%)



We can see from the Tab.4.1, we can see the earnings before interests and taxes are increasing from € 889.781 million to € 939.237 million from 2013 to 2014, and then decrasing very fast from € 701.551 millon to € 431.181 million from 2015 to 2017. We can see the former Tab.3.2, the main reason is the costs and expenses are constanly increasing very obviously since 2015, the concrete fator is the salaries have to increase, costs of raw materials, land and equipemnt fees are all increasing in the recent years. So it leads to the operating profit are decreasing from 2015 to 2017. So PRADA strengthens the internet sales and costs conterol, and gradually to improve the problem. Besides, we can know the revenues are relatively stable in the reccent years, only in 2017, the revenues suddenly decreased € 363.702 million. As we all know, raising the prices are the best way to increase the revenues, but for competitors are also full of strength, there is not much room to increase prices. Therefore, we can understand PRADA has its own strength, and it needs to make strategic adjustments based on the actual situation at that time.

From the Chart.4.1, we can know the tendency of operating profit margin, it is relatively stable ranging from 26% to 27% from 2013 to 2014, but it is abruptly decreasing from 26.18% to only 14.17% from 2014 to 2016, and then it tends to be stable about 14% from 2016 to 2017. The main reason leading to the operating profit margin going down very fast from 2015 is the decline of earnings before interests and taxes. We should know the higher the operating profit margin is, the more the operating profit is provided by the sales of commodities, and the stronger the profitability is. On the contrary, the lower the ratio is, it shows the weaker the profitability of the enterprise. Therefore, the company needs to constantly innovate and update the design to meet the constant needs of the customers and thus increase revenues. And besides, the company should control the costs continually, saving the expenses in the process, but also ensure the quality and management.

4.1.2 Net profit margin

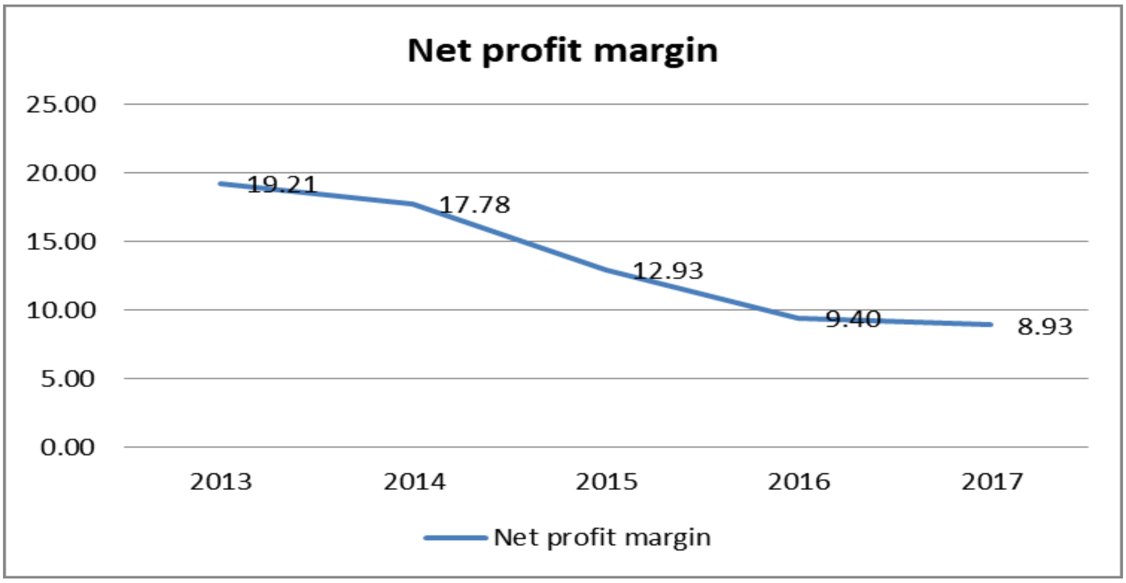
As we have introduced in the chapter 2, the net profit margin is equal to the earnings after tax divided by the revenues. And the earnings after tax are actually the net incomes. To be honest, the results of the net profit margin, is that the proportion we have calculated in the vertical common-size analysis of the item of the net profits.

And the following Tab.4.2 and Chart.4.2 show the net profit margin of PRADA from 2013 to 2017.

Tab.4.2 Net profit margin of PRADA from 2013 to 2017(%)

	2013	2014	2015	2016	2017
EAT	633,277	637,805	459,218	333,338	284,190
Revenues	3,297,219	3,587,347	3,551,696	3,547,771	3,184,069
Net profit margin	**19.21**	**17.78**	**12.93**	**9.40**	**8.93**

Chart.4.2 Trend of net profit margin of PRADA from 2013 to 2017(%)



As we have described, the net profit margin is a profitability ratio that measures the amount of net income earned of sales generated by comparing the net income and net sales of a company. It is the percentage of the net profit to the revenues, which is one of the most important indicators in the company's financial development.

The Tab.4.2 shows the change conditions of the net profit margin. As we see, the net profit margin has declined of PRADA from € 633.277 million to only € 284.190 million from 2013 to 2017. We know the net profit margin is an important index to measure the company's profitability. But the net profit margin is decreasing year by year. The highest net profit margin is in 2013, it is 19.21%, but in 2017, it just becomes 8.93%, the net profit margin is the lowest. As we see, the revenues are relatively stable in the reccent years, only in 2017, the revenues suddenly decreased € 363.702 million. As we all know, raising the prices are the best way to increase the revenues, but for competitors are also full of strength, there is not much room to increase prices. However, unreasonable pricing leads to excessive inventory. And the uncertainty in the global business environment and a depressed market are the factors that contribute to the decline of revenues in 2017. And we can know that the earnings after tax are continuously decreasing from nearly € 285 million to € 131 million from 2013 to 2017, because the taxes are reflecting the operating profit situations , it should be highly paid attention. We can see from the former Tab.3.2, the costs of goods sold are increasing from 2013 to 2015, and the opearting expenses are increasing ranging from € 1,400 million to € 2,100 million from 2013 to 2016, as for 2017, it is a special year, so we can analyze it separately. In the recent years, the price level is rising, workers' wages are also rising, and the costs of renting the lands and raw materials are increasing, especially in 2015 and 2016. As for 2017, the reason why the costs of declining € 85.249 million and expenses of decreaing € 218.551 million than 2016. In this year, the management has realized that costs were going up, so should control the costs and expenditures, so they begin to cut down these costs and expenses.

The Chart.4.2 shows the tendency of net profit margin directly, it has been on a downward trend from nearly 20% to 8% from 2013 to 2017. The highest point of the net profit margin is 19.21% in 2013, and the lowest point falls to only 8.93% in 2017. As we have streesed, the costs of goods sold about € 1,000 million, operating expenses about € 1,800 million and other expenses about € 33 million, they are all very high from

2015 to 2016. Because the store lease acquisition costs are going up in the two years. Then the purchase costs of the equipment and plant and the production costs are more expensive. Therefore, PRADA has realized this problem and adjusted to control the costs and expenses in 2017. In summary, the important work for the company is costs cutting and product restructuring.

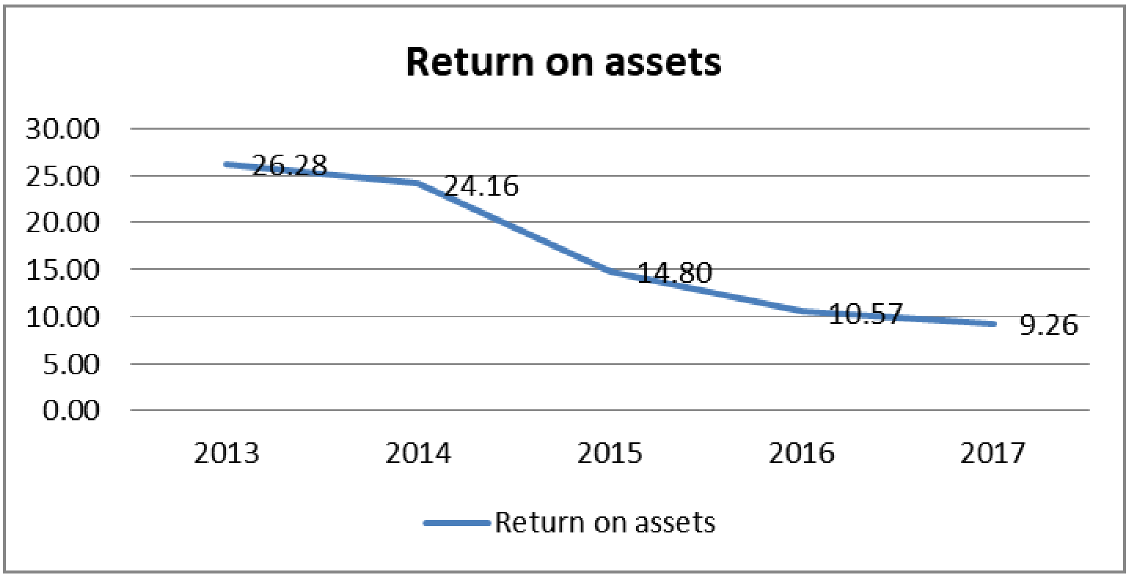
4.1.3 Return on assets

The return on assets gives an indicator reference as to how efficient a company's management is at using its assets to generate earnings. It evaluates the profitability of using the whole assets. And the following Tab.4.3 and Chart.4.3 show the return on assets of PRADA from 2013 to 2017.

Tab.4.3 Return on assets of PRADA from 2013 to 2017(%)

	2013	2014	2015	2016	2017
EBIT	889,781	939,237	701,551	502,893	431,181
Total assets	3,385,279	3,888,292	4,738,877	4,756,555	4,656,929
Return on assets	**26.28**	**24.16**	**14.80**	**10.57**	**9.26**

Chart.4.3 Trend of return on assets of PRADA from 2013 to 2017(%)



As we know, the return on assets is one of the most widely used indicators to measure the profitability of the companies. And the higher the return on assets is, the better the asset influence of the usages, and indicates the company has achieved great results in increasing the revenues and saving the funds and so on. Otherwise, it shows the opposite result.

The Tab.4.3 shows the earnings before interests and taxes are increasing from Euro 889.781 million to € 939.237 million from 2013 to 2014. However, since 2015, they are decreasing from € 701.551 million to just € 431.181 million year by year. As for the total assets, they are going up a lot ranging from € 3,385 million to nearly € 4,800 million during the recent years, although in 2017, the total assets decrease € 99.626 million. And we can see, the return on assets are decreasing in the recent years from 26.28% to 9.26% from 2013 to 2017. As we have said, the higher the return on assets, the better for the company, so it is not good for PRADA. Because although the total assets are increasing, the earnings before interests and taxes are declining year by year since 2015. And we can see from Tab.4.3, there is a slighter decline of total assets in 2017 than 2016, because the inventories and the derivative financial instruments are decreasing in 2017. Since 2015, the total assets are relatively stable around € 4,700 million, although it goes down in 2017. From 2015 to 2016, the costs of products are higher than other years and up to around € 1,000 million, and the opearting expenses are also higher during the two years, resulting from the price level rising. As for 2017, the revenues decreasing € 363.702 million, it leads to the earnings before interests and taxes lower than other recent years, resulting from the recession of the economy and production upgrading. As well as increasing the assets, it should also increase opearting profits substantially, making the assets to be used effectively.

From the Chart.4.3, we can see the tendency of going down of the return on assets from 26.28% to 9.26% from 2013 to 2017, from 2013 to 2014, the return on assets keeps stable, but since 2015, it goes down very fast, at this year, it is decraing nearly 10%. The best year for return on assets was 2013, it was 26.28%, the worse year was 2017, it was just 9.26%. In fact, the level of return on assets directly reflects the competitive strength and development ability of the company, and it shows whether the company can operate with debt. We have seen the return on assets is declining year by year. The material price rise, but the products price can't be adjusted synchronously, production efficiency decreased, and administrative or other expenses are going up. They all lead to the decline of the return on asstes. So PRADA should find the problem itself according to the company's situations, increasing products innovation, design and sales, then expand its competitive strength.

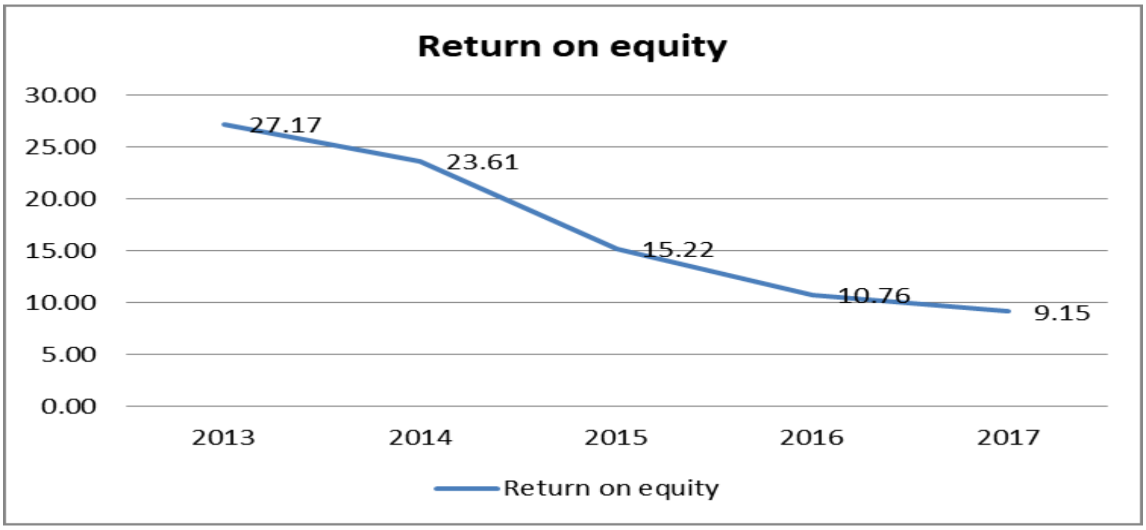
4.1.4 Return on equity

As we know, the return on equity indicates the investors of investing the company and the situation of return, so the higher it is, the better for the investors. At the same time, it evaluates the performance of corporate management and profitability. Therefore, it is very important to know about the stability of the return on equity and the development trend. The following Tab.4.4 and Chart.4.4 show the return on equity of PRADA from 2013 to 2017.

Tab.4.4 Return on equity of PRADA from 2013 to 2017(%)

	2013	2014	2015	2016	2017
EAT	633,277	637,805	459,218	333,338	284,190
Equity	2,330,492	2,701,540	3,018,147	3,097,377	3,104,530
Return on equity	**27.17**	**23.61**	**15.22**	**10.76**	**9.15**

Chart.4.4 Trend of return on equity of PRADA from 2013 to 2017(%)



We can see from the Tab.4.4, the earnings after tax are decreasing from nearly € 460 million to € 280 million from 2015 to 2017. From 2013 to 2014, the earnings after tax are increasing from € 633.277 million to € 637.805 millon, but since 2015, it is abruptly decreasing to € 459.218 million, and from 2016 to 2017, it is continuously down. We have said before, it is mainly because of the costs and expenses going up. So the company is facing the net profits a declining trend. Therefore, there are two main ways to increase the earnings after tax, expand the sales market and increase the revenues, providing better service, setting prices scientifically, the other side, is to reduce the costs and expenses, strict controlling and effective planning. And we can see, the equity is increasing year by year, it expresses the company's own capital is still quite strong and constantly attracts shareholders to invest in the company. The highest year for return on equity is 2013, and the lowest year for return on equity is 2017. So the company should pay attention to the decline of the return on equity.

From the Chart.4.4, we can see there is a sudden drop in the recent years, especially from 2015. In 2013, the highest point of the return on equity is 27.17%, but in 2015, it is just becoming 15.22%. Because the depreciation problem of landing and equipment, and cost spending problems are severe in 2015. The lower the return on equity is, the less beneficial for the investors. So the company needs to strengthen the sales and cost management, achieving the aim of increasing the return on equity. And as we know, in general, the return on assets is often less than return on equity, because total assets are euqal to total liabilities and total equity, the denominator is smaller, then it goes faster . But in 2014 and 2017, we can see the retuen on assets is larger than return on equity, 24.16% is larger than 23.61% in 2014, and 9.26% is bigger than 9.15% in 2017. Therefore, we should know more concrete situations. As we know, the biggest difference between ROA and ROE is that the former reflects the profitability of total assets, the latter reflects the profitability of shareholders' equity which is also called net capitl. Net capital is a part of the total assets of an enterprise, so the return on equity must be affected by the rate of return on total assets of the enterprise. And we can analyze Tab.3.7, the realtive change of total assets has a slower speed than equity in 2014 and 2017, it shows these two years, the compaies are concentrating more on the shareholders' equity, although because of the influence of the increasing of costs and expenses, leading to the earnings after taxes have decreased gradually in 2014. And in 2017, the company has downsized the scale of total assets, so made the ROA is larger than ROE.

4.2 Liquidity ratios of Prada company

Liquidity ratios measure company´s ability to convert into cash to pay off its immediate or short-term liabilities and obligations. They are very important indicators to measure the ability to pay off current debt obligations.

4.2.1 Current ratio

As we have introduced before, the current ratio is a liquidity ratio that measures a company's ability to pay short-term obligations. It tells investors and analysts how a company can maximize the current assets on its balance sheet to satisfy its current debt.

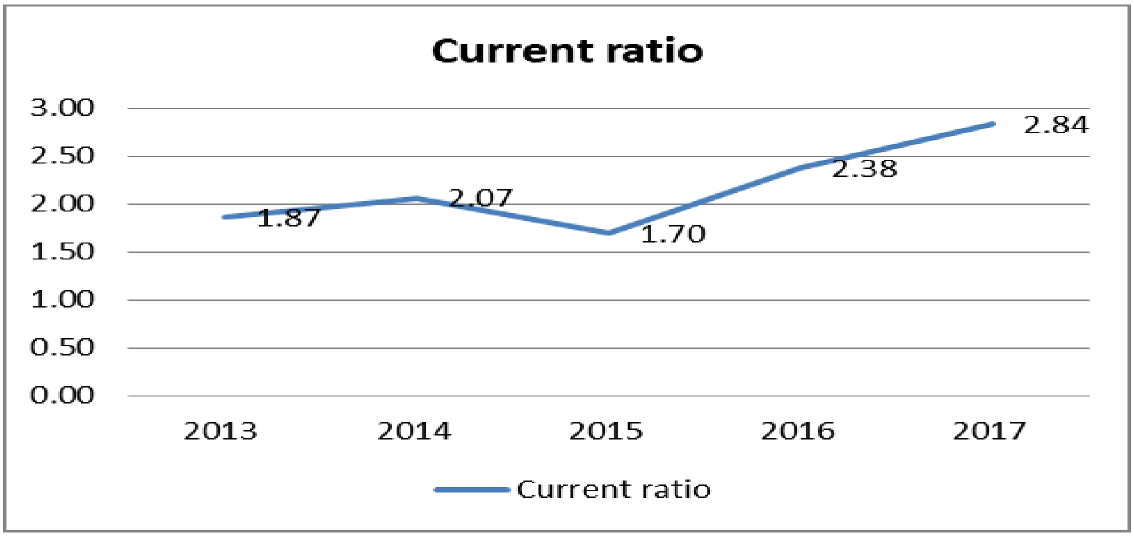
Generally speaking, the higher the current ratio is, the stronger the liquidity of enterprise assets is, and the stronger the short-term solvency is. However, a very large ratio indicates that more current assets will be occupied, which will affect the operating capital turnover efficiency and profitability.

The following Tab.4.5 and Chart.4.5 show the current ratio of PRADA from 2013 to 2017.

Tab.4.5 Current ratio of PRADA from 2013 to 2017

	2013	2014	2015	2016	2017
Current assets	1,387,449	1,461,596	1,899,955	1,888,438	1,810,043
Current liabilities	742,062	706,475	1,115,025	791,819	636,775
Current ratio	**1.87**	**2.07**	**1.70**	**2.38**	**2.84**

Chart.4.5 Trend of current ratio of PRADA from 2013 to 2017



The Tab.4.5 shows the current assets are increasing overall, although a slight decline in the later years. From 2013 to 2015, the current assets are increasing continously from € 1,387.449 million to € 1,899.955 million, especially in 2015, there is a big increase, and from 2016 to 2017, it is still a steady trend keeping over € 1,810 million although has a slight decline. Therefore, we can know the current assets are increasing a lot in 2015, the cash and cash equivalents, and inventories grow evidently in 2015. The cash and cash equivalents increase, which show the company has good liquidity to convert into cash. However, it does not mean it is good to have a lot of them. Because cash holding level is the result of balancing the risk and efficiency of capital. Therefore, more cash and cash equivalents are not always better, the company should determine a reasonable amount of cash holdings. At the same time, we can know the inventories are increasing fast in 2015, up to € 654.545 million, which show the expansion of production and sales scale. From the short-term point, inventory overstock, reflects the current assets are increasing, enhancing the repayment ability and liquidity of assets of the company. But from the long-term point, inventories increasing a lot will lead to lose the source of profits even break the cash flow. So PRADA needs to have strict management and establish a rational process and system to manage inventories, at the same time, it is also important to improve the procurement management system. And we can see the current liabilities are also increasing by 57.83% fast in 2015, the reason is that short-term loans from banks and derivative financial instruments are increasing in 2015. The phemomenon fully shows the company is expanding the investment scale. But the current liabilities decrease rapidly from 2016 to 2017. Because the trade payables and tax payables are both decreasing during the two years. It reflects the company has realized the problem and started to decrease the current liabilities.

From the Chart.4.5, we can see the current ratio goes through a process of increasing from 1.87 to 2.07 from 2013 to 2014, then decreasing to 1.70 from 2014 to 2015, and then continuously increasing up to 2.84 from 2016 to 2017. The lowest point of current ratio is 1.70 in 2015, and the highest point is 2.84 in 2017. The main reason is that there is a great difference in current liabilities between 2015 and 2017. It has large current liabilities in 2015, and then the company has begun to reduce the scales of current liabilities. For creditors, the higher the current ratio, the stronger the ability to repay the short-term debts and the rights can be insured. But for the company, the current ratio should not be too high, because it reflects there are large amount of funds are put in the current assets, and will influence the operation and efficiency of capital use. So in 2014, the current ratio is 2.07, it shows the company has a relatively good current ratio in this year.

4.2.2 Quick ratio

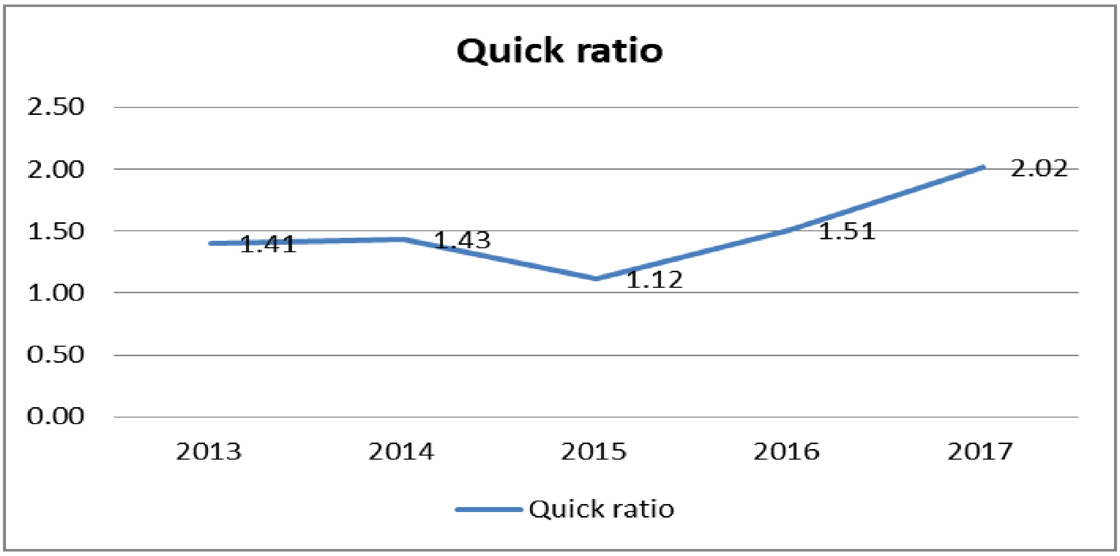
Quick ratio measures the ability of a company to use its current cash or quick assets to pay off its current liabilities immediately. Quick assets are those assets that can be used almost immediately to pay current liabilities, such as cash, bank deposits, short-term investments, accounts receivable and so on. In the calculation of quick ratio, inventory should be deducted from current assets, mainly because inventory is the least liquid among current assets. Therefore, the quick ratio is more reliable in reflecting short-term solvency.

The following Tab.4.6 and Chart.4.6 show the quick ratio of PRADA from 2013 to 2017.

Tab.4.6 Quick ratio of PRADA from 2013 to 2017

	2013	2014	2015	2016	2017
Current assets	1,387,449	1,461,596	1,899,955	1,888,438	1,810,043
Inventories	343,802	449,903	654,545	692,672	526,941
Current liabilities	742,062	706,475	1,115,025	791,819	636,775
Quick ratio	**1.41**	**1.43**	**1.12**	**1.51**	**2.02**

Chart.4.6 Trend of quick ratio of PRADA from 2013 to 2017



From the Tab.4.6, we can know the current assets are growing from € 1,387.449 million to € 1,899.955 million from 2013 to 2015, just decreasing a little from € 1,888.438 million to € 1,810.043 million from 2016 to 2017, but staying stable. And these inventories go through a process of increasing from € 343.802 million to € 692.672 million from 2013 to 2017, and decreasing to € 526.941 million in 2017. It shows in the former years, the company is still expanding the scale of producing, and makes the inventories more. The inventories can cause the expenses and capital burden to increase, and at the same time, they increase the risks of price changes. So it is not beneficial for one company to have a lot of inventories. Thus the company has declined the scale of inventories in 2017 through strict inventories control. And we can see, the current liabilities have a constant fluctuation process, the biggest fluctuation is increasing 57.83% in 2015. And we have introduced before, the main reason of the current liabilities increasing a lot in 2015 is that the short-term loans from banks and derivative financial instruments are both increasing very quickly, which shows the company needed to use short-term debts to gain more funds at that time. But it is not good for one company to have many debts, so in 2017, the company has tried to decrease the current liabilities by decreasing the short-term financial payables and bank overdraft.

We can see from the Chart.4.6, the quick ratio keeps stable from 1.41 to 1.43 from 2013 to 2014, but it goes down abruptly to only 1.12 in 2015, and then starts to go up continually up to 2.02 from 2016 to 2017. And we can know the lowest point is just 1.12 in 2015, and the highest point reaches to 2.02 in 2017. The quick ratio in 2017 is nearly double than 2015. The main reason is the current liabilities have a great difference. The company has realized the problems of having more current liabilities, thus adjusted the number of them in the later years. As we know, it is better to have a higher quick ratio. And we can see, the current ratios of PRADA are above 1 all the time from 2013 to 2017, so it shows the company has a great ability of liquidity and solve the future solvency more easily. But the quick ratio is very high such as in 2017, it is not very good because it shows the use of funds is not inefficient. So the company should control it in a reasonable level by changing the concrete items.

4.2.3 Cash ratio

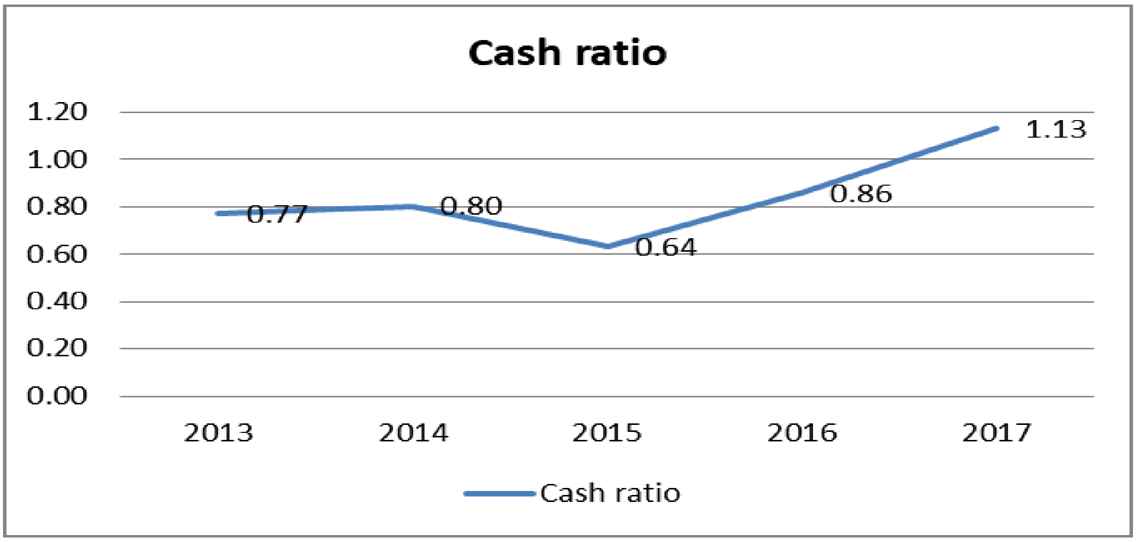
Cash ratio is the ratio of a company's total cash and cash equivalents to its current liabilities. It evaluates the company's ability to repay its short-term debt and measures how well current liabilities are covered by the cash flows generated from a company's operations. The higher the cash ratio is, it shows the ability to convert into cash stronger.

The following Tab.4.7 and Chart.4.7 show the cash ratio of PRADA from 2013 to 2017.

Tab.4.7 Cash ratio of PRADA from 2013 to 2017

	2013	2014	2015	2016	2017
Cash and cash equivalents	571,746	568,414	708,966	680,601	722,214
Current liabilities	742,062	706,475	1,115,025	791,819	636,775
Cash ratio	**0.77**	**0.80**	**0.64**	**0.86**	**1.13**

Chart.4.7 Trend of cash ratio of PRADA from 2013 to 2017



From the Tab.4.7, we can see the cash and cash equivalents are instable ranging from € 568 million to € 723 million from 2013 to 2017. It goes through a process of subtracting from € 571.746 million to € 568.414 million from 2013 to 2014, and then increasing to € 708.966 million from 2014 to 2015, then decreasing to € 680.601 million from 2015 to 2016, finally increasing to € 722.214 million in 2017 again. And we can know the number of cash and cash equivalents the least is just € 568.414 million in 2014, and the most is € 722.214 million in 2017. It is very essential for any company to own them, but should have them moderately. And we can see the company adjusted the cash and cash equivalents according to the financial situations every year. As for current liabilities, we have analyzed before. The other recent years are stable about € 700 million except 2015 is € 1,115.025 million, because the short-term borrowings are increasing more in this year. Current liabilities increase the repayment pressure of corporate liabilities, which increase the financial risks of enterprises. So PRADA must balance the structure of fund raising and fund operation, and attach great importance to the matching relationship between fund operation structure and debt structure. Making good use of current liabilities is a good way for enterprises to increase operating capital, optimize capital structure, reduce financing cost and improve operating efficiency of capital.

The Chart.4.7 shows the tendency of steady from 0.77 to 0.80 from 2013 to 2014, then decreasing to 0.64 from 2014 to 2015, lastly increasing to 1.13 from 2015 to 2017. Obviously, the lowest point is just 0.64 in 2015, and the highest point is 1.13 in 2017. And we can know the cash and cash equivalents in 2015 are not more than other years, and the liabilities are the most in the recent year, they both affect the cash ratio is the least. If the cash ratio is too low, the enterprise will be faced with a high risk of not being able to pay the interest on the loan or repay the debts due. However, if the cash ratio is too high, it means that the current liabilities of the enterprise are not properly used, because the amount of such assets is too high, which will lead to the increase of the opportunity cost of the enterprise. Therefore, on the whole, we can see there are good cash ratios in PRADA, the company has a good liquidity. At the same time, the company should control them in a reasonable range, ensuring a healthy development of the company.

4.3 Solvency ratios of Prada company

Solvency ratios measure the company´s ability to pay off its obligations. It can analyze the debt paying ability of enterprises, analyze the structure of corporate equity and so on. The ratio is lower, it shows better to default on the debts. And the solvency ratios include debt ratio, debt-to-equity ratio and interest coverage.

4.3.1 Debt ratio

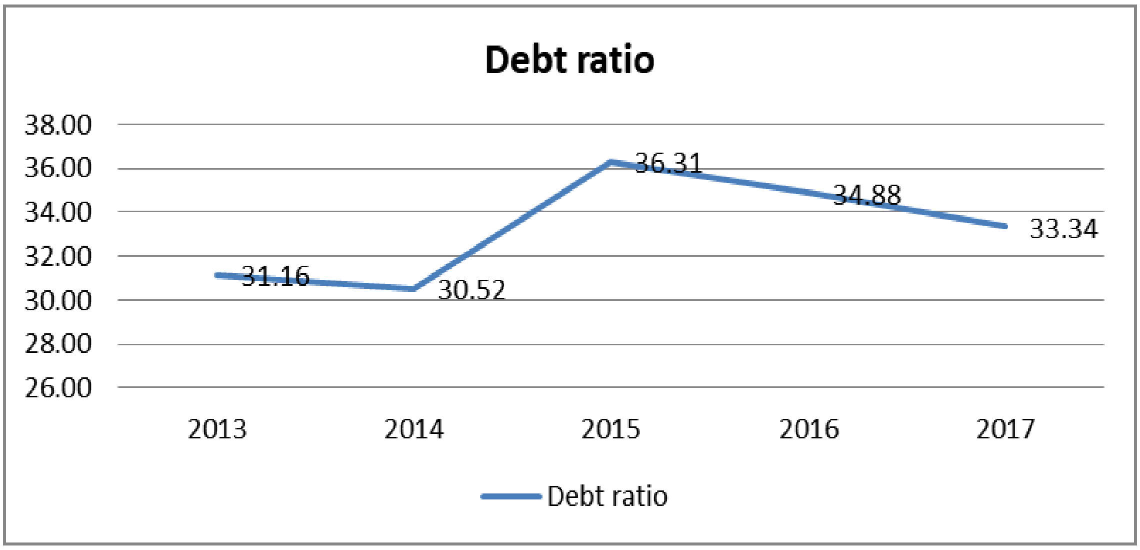
Debt ratio reflects the ability to an enterprise to repay debt, it is total debts divided by total assets. And it is lower, it is better to default and resist risk. Creditors believe that the lower the debt ratio is, the better for them, because they have more secure and lower loan risk. From the operator's point of view, the debt ratio is too high, the enterprise is difficult to continue to raise funds, the debt ratio is too low, the enterprise operation lacks vitality. Therefore, enterprises should make a balance between profit and risk to determine a reasonable capital structure.

The following Tab.4.8 and Chart.4.8 show the debt ratio of PRADA from 2013 to 2017.

Tab.4.8 Debt ratio of PRADA from 2013 to 2017(%)

	2013	2014	2015	2016	2017
Total liabilities	1,054,787	1,186,752	1,720,730	1,659,178	1,552,399
Total assets	3,385,279	3,888,292	4,738,877	4,756,555	4,656,929
Debt ratio	**31.16**	**30.52**	**36.31**	**34.88**	**33.34**

Chart.4.8 Trend of debt ratio of PRADA from 2013 to 2017(%)



We can see from the Tab.4.8, the total liabilities are increasing from € 1,054.787 million to € 1,720.730 million from 2013 to 2015, the minimum was reached in 2013, and it peaked in 2015, and then decreasing to € 1,552.399 million from 2016 to 2017. We have known the total assets are increasing very fast and up to € 4,738.877 million in

2015, it is because the current liabilities and non-current liabilities are both going up, especially the current liabilities are growing significantly. Then we should analyze mainly because the short-term loans from banks and derivative financial instruments are increasing very quickly, showing the company needed to use short-term debts to gain more funds at that time. Then we can see the total assets are continually increasing although it has a slight decline in 2017. The smallest number was € 3,385.279 million in 2013, but it is still a very large base, and the largest number was € 4,756.555 million in 2016. There are main two reasons resulting in the totoal assets constantly increasing from 2013 to 2016, the inventoies in the current assets, then the property, plant and equipment in non-current assets are going up ove time. It is not good for any company to have a lot of inventories, the phenomenon shows the company production and sales scale expansion, the decline in overall sales, increasing new items inventory. So PRADA should consider the whole purchasing cost, and conduct more strict and standardized inventory management, establishing efficient processes and systems to manage inventories, forecasting sales demand more accurately, intermediate production and group installation, back-end procurement, need to carry out very strict process management and control. Thus we can know the total assets are decreasing to € 4,656.929 million in 2017, mainly due to the inventories are decreasing in this year, it indicates the company has made reasonable and effective adjustments.

From the Chart.4.8, the debt ratio is decling slightly from 31.16% to 30.52% from 2013 to 2014, and then increasing abruptly to 36.31% from 2014 to 2015, and lastly decling again to 33.34% from 2015 to 2017. And we have said it is better to have a lower debt ratio, in 2014, the ratio is just 30.52%, so it shows the stronger ability to pay the debt and decrease the risk to default. But due to the total liabilities are more in 2015, making the debt ratio is higher in 2015 than other years. Therefore, controling liabilities amount by changing the specific items and having a balanced proportion of assets and liabilities are particularly important. However, on the whole, the debt ratios are all low in the recent years, it implies the company has a good ability to pay off the debts.

4.3.2 Debt-to-equity ratio

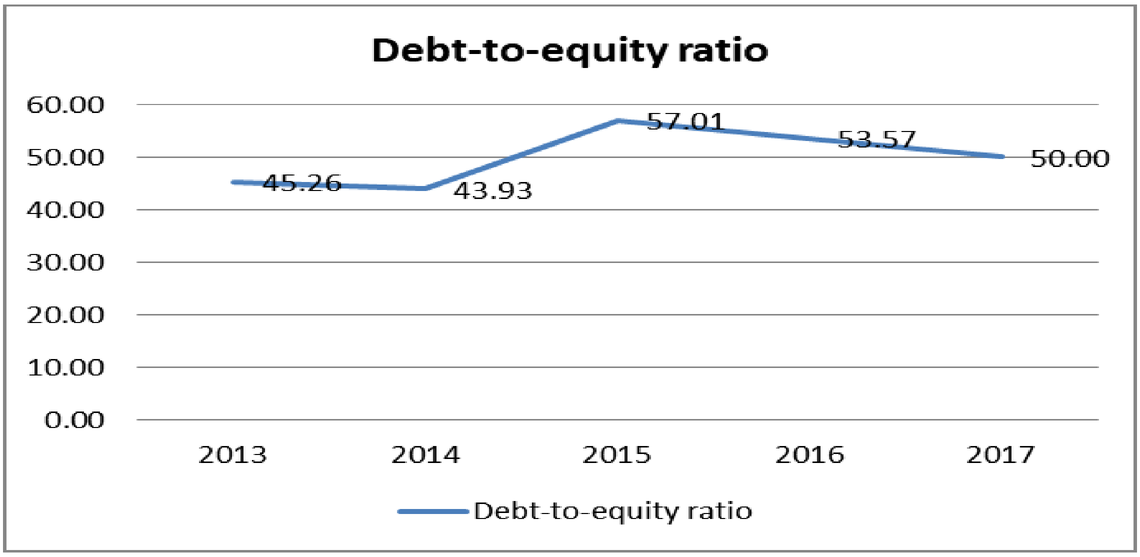
Debt-to-equity ratio is calculated by dividing a company's total liabilities by its shareholder equity. The ratio is used to evaluate a company's financial leverage. It measures the degree of a company that is financing its operations through debt.

The following Tab.4.9 and Chart.4.9 introduce the debt-to-equity ratio of PRADA from 2013 to 2017.

Tab.4.9 Debt-to-equity ratio of PRADA from 2013 to 2017(%)

	2013	2014	2015	2016	2017
Total liabilities	1,054,787	1,186,752	1,720,730	1,659,178	1,552,399
Equity	2,330,492	2,701,540	3,018,147	3,097,377	3,104,530
Debt-to-equity ratio	**45.26**	**43.93**	**57.01**	**53.57**	**50.00**

Chart.4.9 Trend of debt-to-equity ratio of PRADA from 2013 to 2017(%)



The Tab.4.9, we can see the overall situation of debt-to-equity is at a stable level. But we can see the debt-to-equity ratio is the highest with 57.01% in 2015. The main reason is that the total liabilities have a bigger number withh € 1,720.730 million in 2015. And we have analyzed the concrete factors for a few times before. The short-term loans from banks and total derivative financial instruments are increasing very quickly, which illustrate the company had to need more funds to support capital turnover and production scale expansion. But it is not beneficial for a company to have them more, so the company decreases the number of total liabilities in the later years. Besides, we can know the total equity is increasing over the recent years, which is a very important financial indicator, reflecting the company's own capital. It shows the difference between the total assets of the company and all existing debts, including the capital invested by the owner and the remaining earnings,etc. And we can understand the company has a good business condition from 2013 to 2015.

The Chart.4.9 shows the debt-to-equity ratio is decrasing from 45.26% to 43.93% from 2013 to 2014, and then increasing to 57.01% fast from 2014 to 2015, and later decrasing again to 50.00% from 2015 to 2017. The lowest point is 43.93% in 2014, and the highest point is 57.01% in 2015, mainly because of the differences between total liabilities as we have said. And we know the debt-to-equity ratio reflects the comparison between the funds provided by creditors and those provided by shareholders. The lower the ratio is, the better the financial status of the enterprise will be and the rights and interests of creditors will be guaranteed. And we can see the debt-to-equity ratios are all less than 1.0, mianly about 0.5, so we can get that PRADA has a strong solvnecy, healthy and stable development of the financial situation.

4.3.3 Interest coverage

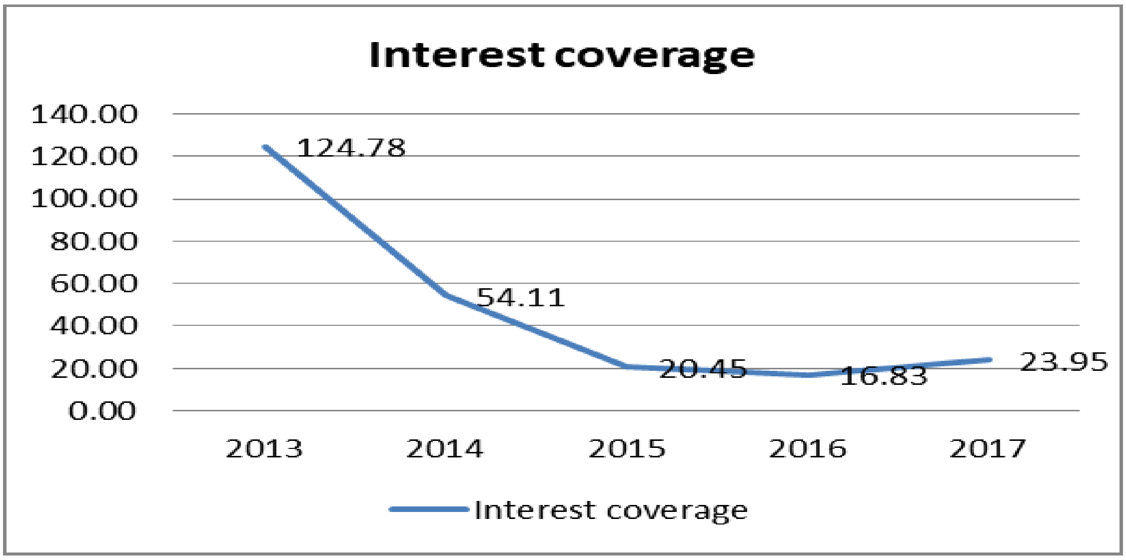
Interest coverage is used to determine how easily a company can cover the interest payments with its earnings. In other words, the interest coverage ratio may be calculated by dividing a company's earnings before interest and taxes during a given period by the company's interest payments. It is a measure of a company's ability to pay interest on debt. Compared with the interest expense, the higher the multiple is, the stronger the ability to pay the interest expense is. So it is essential for creditors to measure the security degree of the ratio.

The following Tab.4.10 and Chart.4.10 introduce the interest coverage of PRADA from 2013 to 2017.

Tab.4.10 Interest coverage of PRADA from 2013 to 2017

	2013	2014	2015	2016	2017
EBIT	889,781	939,237	701,551	502,893	431,181
Interest paid	7,131	17,357	34,304	29,872	18,003
Interest coverage	**124.78**	**54.11**	**20.45**	**16.83**	**23.95**

Chart.4.10 Trend of interest coverage of PRADA from 2013 to 2017



From the Tab.4.10, we can see the earnings before intersts and taxes are increasing from € 889.781 million to € 939.237 million from 2013 to 2014, and it reaches the maximum in 2014, and then it is decreasing continually to only € 431.181 million from 2015 to 2017. And we have researched before, the main reason is the costs and expenses are constanly increasing in the later years, the concrete fator is the salaries have to increase, costs of raw materials, land and equipemnt fees are all increasing in the recent years. So it led to the operating profits are decreasing from 2015 to 2017. So PRADA has strengthened the internet sales and costs conterol. Besides, the main reaon of the earnings before interests and taxes are high in 2014 is that the total revenues are very high in this year, which shows the products sell better in this year. But we can see the interest paid goes through a process of increasing from 2013 to 2015, and then decreasing from 2015 to 2017. The minimum is € 7.131 million in 2013, and the maximum is € 34.304 million in 2015. It shows the company has more pressure to pay off the interests, decided by the economic environment and supply and demand at that time. So it is necessary to reduce capital cost, and make capital utilization plan and use commercial credit, strengthen the management of capital deposits and loans.

From the Chart.4.10, we see the interest leverage is decreasing from 124.78 to only 54.11 from 2013 to 2016 all the time, the decline was the most pronounced in 2014. And it recovers slightly to 23.95 until 2017. As we know, in 2013, the interests coverage has a very big multiple of 124.78. Because in this year, the interest paid is little. As long as the interest coverage is large enough, the enterprise will have sufficient ability to pay interest, and vice versa. Without sufficient profit before interest and tax, it will be difficult to pay interest. The interest coverage not only reflects the profitability of the enterprise, but also reflects the profitability of the debt, which is an important indicator to measure the long-term solvency of the enterprise. In order to maintain normal solvency, the interest coverage should be high, and the higher the ratio, the stronger the long-term solvency of the enterprise. If it is too low, the enterprise will face the risk of loss, the decline of the security and stability of debt repayment. So we can conclude PRADA has a very good solvency to support the payments in the reccent years.

4.4 Activity ratios of Prada company

Activity ratios measure a company's ability to turn items on its balance sheet into cash or turnover. For companies, turning inventory into accounts receivable and then into cash is a cyclical process, if made faster, it is better for this company. The ratios are included: average collection period, accounts receivable turnover, inventory turnover, total assets turnover, etc.

4.4.1 Average collection period

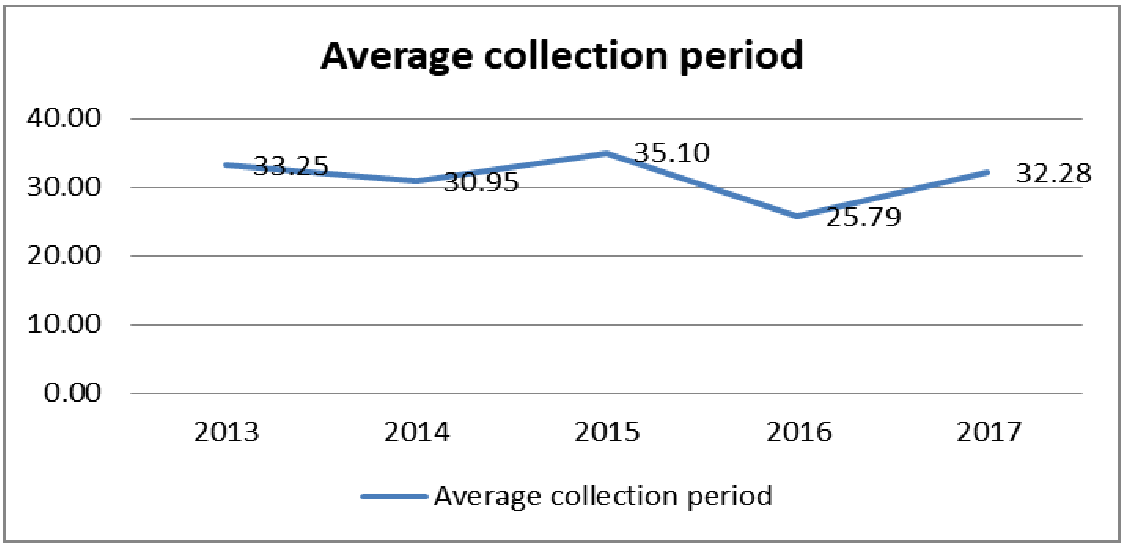
Average collection period (ACP) is the amount of time it takes for a business to receive payments owed in terms of accounts receivable. And reducing period of time is an indicator of increasing efficiency. The shorter the average collection period is, the more beneficial and profitable to the company.

And the following Tab.4.11 and Chart.4.11 show the average collection period of PRADA from 2013 to 2017.

Tab.4.11 Average collection period of PRADA from 2013 to 2017

	2013	2014	2015	2016	2017
Accounts receivable	304,525	308,405	346,284	254,183	285,504
Revenues	3,297,219	3,587,347	3,551,696	3,547,771	3,184,069
Average collection period	**33.25**	**30.95**	**35.10**	**25.79**	**32.28**

Chart.4.11 Trend of average collection period of PRADA from 2013 to 2017



We can see from the Tab.4.11, the accounts receivable are unstable, firstly they are increasing from € 304.525 million to € 346.284 million from 2013 to 2015, then decreasing fast to € 254.183 million from 2015 to 2016, lastly increasing to € 285.504 million again from 2016 to 2017. And the maximum is in 2015, the minimum is € 254.183 in 2016. As we know, accounts receivable are a debt formed with the sales behavior of enterprises. So it is not beneficial for companies to have them many. It shows the managers pay insufficient attention to the lack of internal control and incentive system in 2015. And when a product has entered the mature stage, it is the stage when the company's market share runs from peak to trough, and it is also the period when the market competition of similar products is the fiercest. This time the enterprise is still holding a product to undertake producing, it will lead to the problem happening. The company does not have appropriate evaluation, sales contracts with customers with a certain amount of credit sales are adopted to attract customers and expand their market share, resulting in higher book profits, but ignoring the problem of accounts receivable. Therefore, PRADA has realized the phenomenon in 2015, and taken measures to solve it, making the accounts receivable decreasing apparently in 2016. PRADA has started more strict control and management of the accounts receivable, timely recovered accounts receivable to make up for the costs in the process of production and operation, to ensure PRADA continue to operate well. For the defaulting of accounts receivable should organize collection in time. Besides, we can see the revenues are increasing from € 3,297.219 million to € 3,587.347 million from 2013 to 2014, and decreasing to only € 3,184.069 million from 2015 to 2017. But the whole level is in a relatively stable situation. It reflects the sales situation is positive in the recent years.

From the Chart.4.11, we can see the average collection period is at a relatively stable trend around 30, although with some minor fluctuations with 25.79 in 2016. And we can see the minimum is just 25.79 in 2016, the maximum is 35.10 in 2015. So the difference is mainly because of the accounts receivable. It shows the company made the accounts receivable less positively especially in 2016. And we know the shorter the average collection period of accounts receivable, the stronger the company to get them into cash. Therefore, we can see the company has a relatively low average collection period, so it shows better efficiency for PRADA to use them.

4.4.2 Accounts receivable turnover

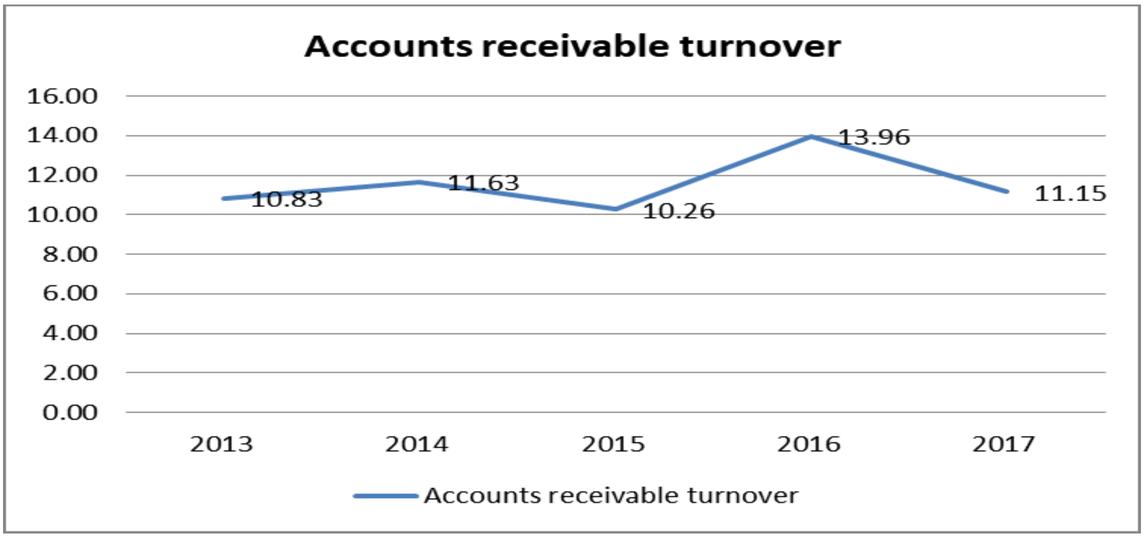
The accounts receivable turnover is an activity ratio, measuring the effectiveness to collect accounts receivable, an entity's ability to collect money from its customers. A high accounts receivable turnover shows the efficiency of the company collecting accounts receivable.

The following Tab.4.12 and Chart.4.12 show the accounts receivable turnover of PRADA from 2013 to 2017.

Tab.4.12 Accounts receivable turnover of PRADA from 2013 to 2017

	2013	2014	2015	2016	2017
Revenues	3,297,219	3,587,347	3,551,696	3,547,771	3,184,069
Accounts receivable	304,525	308,405	346,284	254,183	285,504
Accounts receivable turnover	**10.83**	**11.63**	**10.26**	**13.96**	**11.15**

Chart.4.12 Trend of accounts receivable turnover of PRADA from 2013 to 2017



The Tab.4.12 shows the accounts receivable turnover, and we have introduced the revenues and accounts receivable from the last Tab.4.11. The revenues are relatively stable in the recent years. And the accounts receivable are fluctuated in these years, which show the company has adjusted them continually. Besides, we can know the accounts receivable turnover are always staying within a level range of 10 to 14. And the minimum is 10.26 in 2015, and the maximum is 13.96 in 2016. And we can compare these two years, the revenues are nearly approximate which are both about € 3,550 million, but the accounts receivable have a huge difference between 2015 and 2016, decreasing from € 346.284 million to € 254.183 million. So in 2015, the company has too many accounts receivable which needs to be adjusted.

From the Chart.4.12, we can see the accounts receivable turnover are very stable about 11.00 in the former years from 2013 to 2015, and have a fluctuation in the later years from 2015 to 2017, especially in 2015, it is increasing to 13.96. Because we have introduced before, the accounts receivable are the least in 2015, just € 254.183 million. Generally speaking, the higher the accounts receivable turnover, the better the company shows. And we can see PRADA has high rates of it, indicating the company has fast collection speed, short average collection period, and strong solvency. And these abilities can help one company to resist financial risks easier.

4.4.3 Inventory turnover

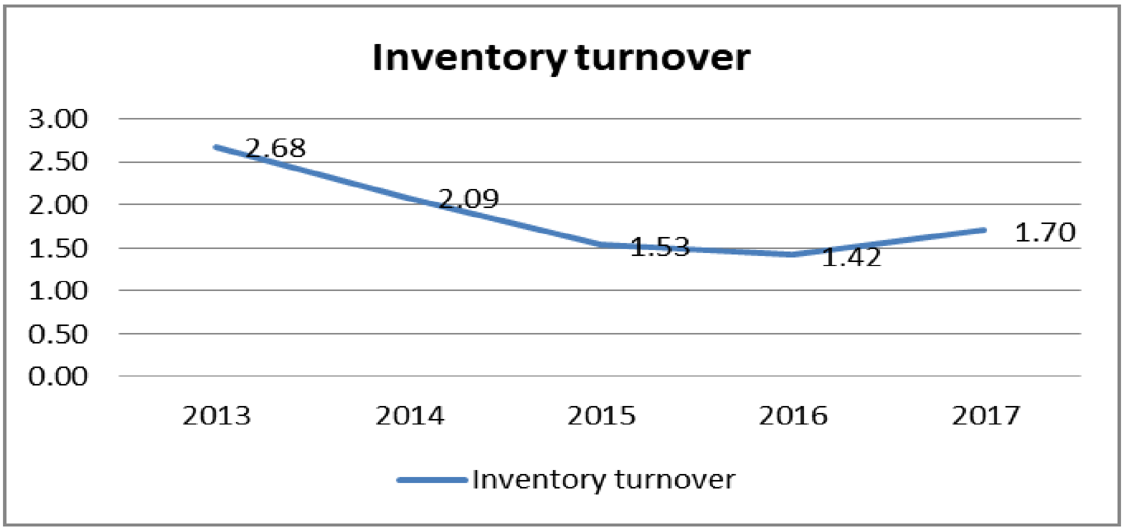
Inventory ratio is a ratio showing the times a company has sold and replaced inventory during a given period, it is to measure the sales capability and inventory management level of an enterprise. It is the ratio of cost of sales to average inventory. Inventory turnover is one of the most important indexes in the analysis of business operation capability and is widely used in business management decision.

The following Tab.4.13 and Chart.4.13 show the inventory turnover of PRADA from 2013 to 2017.

Tab.4.13 Inventory turnover of PRADA from 2013 to 2017

	2013	2014	2015	2016	2017
Costs of goods sold	920,678	938,698	1,001,117	980,206	894,957
Average inventory	343,802	449,903	654,545	692,672	526,941
Inventory turnover	**2.68**	**2.09**	**1.53**	**1.42**	**1.70**

Chart.4.13 Trend of inventory turnover of PRADA from 2013 to 2017



We can see from the Tab.4.13, the costs of goods sold are increasing from € 920.678 million to € 1,001.117 million from 2013 to 2015, and then decreasing to € 894.957 million from 2016 to 2017. And we have analyzed the concrete reasons of causing the changes of the costs. The operating expenses have been paid more attention, thus the company has to decrease the costs of goods sold by controlling the concrete item expenditures. And we can see the average inventories are also going through a process of increasing very fast from € 343.802 million to € 692.672 million from 2013 to 2016, and then decreasing to € 526.941 million from 2016 to 2017. And we also introduced the inventories before. The inventories can cause the expenses and capital burden, and increase the risks of price changes. So it is not beneficial to have a lot of inventories. Thus the company has declined the scale of inventories in 2017 through strict inventories control and management.

And the Chart.4.13, we can know, the whole level of the inventory turnover is at a decline tendency from 2.68 to 1.42 from 2013 to 2016, and in 2017, it is recovering to 1.70. Because the company has decreased the scale of inventories very apparently in 2017. We know the faster the inventory turnover speed, the lower the inventory occupation level, the stronger the liquidity, the faster the inventory into cash or accounts receivable, which will enhance the short-term solvency and profitability of the company. Therefore, we can see the inventory turnover ranges mainly from 1.42 to 2.68, and they reflect the company has a relatively good inventory turnover in recent years, and the company is gradually improving of it.

4.4.4 Total assets turnover

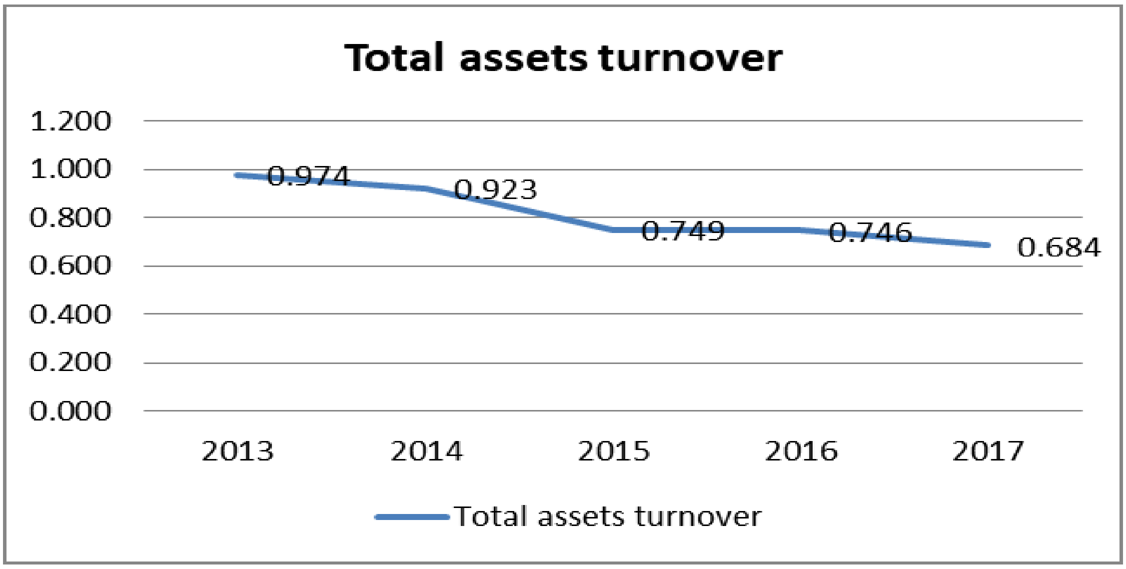
Total assets turnover measures how efficiently a company uses its assets to become the revenues. The higher of the total assets turnover is, the more beneficial and efficient for the company, but if contrary, it means the company is harder to make the assets to generate the sales.

The following Tab.4.14 and Chart.4.14 show the total assets turnover of PRADA from 2013 to 2017.

Tab.4.14 Total assets turnover of PRADA from 2013 to 2017

	2013	2014	2015	2016	2017
Revenues	3,297,219	3,587,347	3,551,696	3,547,771	3,184,069
Total assets	3,385,279	3,888,292	4,738,877	4,756,555	4,656,929
Total assets turnover	**0.974**	**0.923**	**0.749**	**0.746**	**0.684**

Chart.4.14 Trend of total assets turnover of PRADA from 2013 to 2017



We can see from the Tab.4.14, the revenues are increasing from € 3,297.219 million to € 3,587.347 million from 2013 to 2014, and then decreasing to € 3,184.069 million from 2015 to 2017. And we have analzyed the reasons of revenues changing, as we all know, raising the prices are the best way to increase the revenues, but for competitors are also full of strength in this luxury industry, there is not much room to increase prices, and the number of tourists are decreasing in recent years. So the company needs to update the design and conduct a better sales strategy. The total assets are rising sharply year by year, except declining slightly in 2017. And we have said the inventoies in the current assets, then the property, plant and equipment in non-current assets are going up ove time. It is not good for any company to have a lot of inventories, the phenomenon shows the company production and sales scale expansion, the decline in overall sales, increasing new items inventory, thus the company should get to the point, and adjusted them moderately.

The Chart.4.14 shows the trend of total assets turnover, it is decrasing all the time from 2013 to 2017, from 0.974 to 0.684. As we know, the total asset turnover is the ratio between the sales revenues and the total assets of an enterprise in a certain period. The total assets turnover is used to measure the ability of an enterprise to make profits by using assets. The higher the total asset turnover is, the stronger the enterprise's sales ability is, and the better the benefit of asset investment is. But we can know, the total assets turnover is alawys decreasing from 2013 to 2017. So PRADA has to pay attention to the problem, strengthen the internal management and reasonable procurement, improving the efficiency of assets utilization and asssets incomes.

4.5 DuPont analysis of Prada company

In this section, we use DuPont analysis to analyze these financial data of PRADA. So we adopt the formula (2.31), (2.32), (2.33) to calculate ROE of the company. And as we have introduced in the chapter 2, ROE can be decomposed into three main parts: net profit margin, assets turnover, financial leverage. Then we also introduce the formula (2.34) in the chapter 2, ROE can also be divided into another form with five parts: tax burden, interest burden, earnings before interests and taxes margin, assets turnover, financial leverage. Therefore, we will conduct more concrete analysis in this section.

The following Tab.4.15 shows the value of all components, and Tab.4.16 shows the absolute change of all components.

Tab.4.15 The value of all components of ROE of PRADA from 2013 to 2017

	2013	2014	2015	2016	2017
Net profit margin	0.1921	0.1778	0.1293	0.0940	0.0893
Tax burden	0.7167	0.6911	0.6878	0.7013	0.6841
Interest burden	0.9931	0.9826	0.9518	0.9452	0.9635
Operating profit margin	0.2699	0.2618	0.1975	0.1417	0.1354
Total assets turnover	0.9740	0.9226	0.7495	0.7459	0.6837
Financial leverage	1.4526	1.4393	1.5701	1.5357	1.5000
Return on equity(ROE)	**0.2717**	**0.2361**	**0.1522**	**0.1076**	**0.0915**

Tab.4.16 Absolute change of all components of ROE of PRADA from 2013 to 2017

	2013/2014	2014/2015	2015/2016	2016/2017
Net profit margin	-0.0143	-0.0485	-0.0353	-0.0047
Tax burden	-0.0256	-0.0033	0.0135	-0.0172
Interest burden	-0.0105	-0.0309	-0.0066	0.0183
Operating profit margin	-0.0080	-0.0643	-0.0558	-0.0063
Total assets turnover	-0.0514	-0.1731	-0.0036	-0.0621
Financial leverage	-0.0133	0.1308	-0.0345	-0.0356
Return on equity(ROE)	-0.0356	-0.0839	-0.0445	-0.0161

From the Tab.4.15, we can know the return on equity is gradually decreasing from 2013 to 2017, from 0.2717 to 0.0915. And we can analyze the value of the components, it is mainly resulting from the operating profit margin and total assets turnover have a very significant decrease. As we have introduced before, the concrete reason of operating profit margin decreasing in the recent years is that costs of goods sold and operating expenses are increasing. And the reason of total assets turnover declining is that the scale of total assets is gradually enlarged by the company with the development. From the Tab.4.16, we can see absolute changes of most components of ROE are negative from 2013 to 2017, which explains the reason why the return on equity is continually decreasing from 2013 to 2017.

And we have introduced before in the chapter 2 and chapter 4, the return on equity indicates the investors of investing the company and the situation of return, so the higher it is, the better for the investors. At the same time, it evaluates the performance of corporate management and profitability. Therefore, it is very important to know about the stability of the return on equity and the development trend. And we can see the decline of ROE up to minus 0.08 of PRADA begin to widen from 2013 to 2015, and then narrowed to nearly minus 0.02 from 2016 to 2017. Thus we can get that the company is trying to protect the equity of shareholders, decreasing the gap.

We will analyze the factors of ROE further, so we will conduct the influence quantification. And we can use the gradual changes of ROE to research each concrete deep component. Therefore, the following Tab.4.17, Tab.4.18, Tab.4.19, Tab.4.20 will show the gradual changes methods between 2013 and 2017.

Tab.4.17 Gradual changes of ROE of PRADA between 2013 and 2014

	2013(a_0)	2014(a_1)	2013/2014(Δa)	ΔXa_i	Order
Net profit margin(a_1)	0.1921	0.1778	-0.0143	-0.0202	1
Total assets turnover(a_2)	0.9740	0.9226	-0.0514	-0.0133	2
Financial leverage(a_3)	1.4526	1.4393	-0.0133	-0.0022	3
Sum				-0.0357	

$$\Delta X\, a_1 = -0.0143 \cdot 0.9740 \cdot 1.4526 = -0.0202$$

$$\Delta X\, a_2 = 0.1778 \cdot -0.0514 \cdot 1.4526 = -0.0133$$

$$\Delta X\, a_3 = 0.1778 \cdot 0.9226 \cdot -0.0133 = -0.0022$$

We can see from the Tab.4.17, the result of the sum of gradual changes is equal to the absolute change of ROE which is -0.0356 between 2013 and 2014.

Tab.4.18 Gradual changes of ROE of PRADA between 2014 and 2015

	2014(a_0)	2015(a_1)	2014/2015(Δa)	ΔXa_i	Order
Net profit margin(a_1)	0.1778	0.1293	-0.0485	-0.0644	1
Total assets turnover(a_2)	0.9226	0.7495	-0.1731	-0.0322	2
Financial leverage(a_3)	1.4393	1.5701	0.1308	0.0127	3
Sum				-0.0839	

$$\Delta X\, a_1 = -0.0485 \cdot 0.9226 \cdot 1.4393 = -0.0644$$

$$\Delta X\, a_2 = 0.1293 \cdot -0.1731 \cdot 1.4393 = -0.0322$$

$$\Delta X\, a_3 = 0.1293 \cdot 0.7495 \cdot 0.1308 = 0.0127$$

We can see from the Tab.4.18, the result of the sum of gradual changes is equal to the absolute change of ROE which is -0.0839 between 2014 and 2015.

Tab.4.19 Gradual changes of ROE of PRADA between 2015 and 2016

	2015(a_0)	2016(a_1)	2015/2016(Δa)	ΔXa_i	Order
Net profit margin(a_1)	0.1293	0.0940	-0.0353	-0.0415	1
Total assets turnover(a_2)	0.7495	0.7459	-0.0036	-0.0005	3
Financial leverage(a_3)	1.5701	1.5357	-0.0344	-0.0024	2
Sum				-0.0445	

$$\Delta X\, a_1 = -0.0353 \cdot 0.7495 \cdot 1.5701 = -0.0415$$

$$\Delta X\, a_2 = 0.0940 \cdot -0.0036 \cdot 1.5701 = -0.0005$$

$$\Delta X\, a_3 = 0.0940 \cdot 0.7459 \cdot -0.0344 = -0.0024$$

We can see from the Tab.4.19, the result of the sum of gradual changes is equal to the absolute change of ROE which is -0.0445 between 2015 and 2016.

Tab.4.20 Gradual changes of ROE of PRADA between 2016 and 2017

	2016(a_0)	2017(a_1)	2016/2017(Δa)	ΔXa_i	Order
Net profit margin(a_1)	0.0940	0.0893	-0.0047	-0.0054	2
Total assets turnover(a_2)	0.7459	0.6837	-0.0622	-0.0085	1
Financial leverage(a_3)	1.5357	1.5000	-0.0357	-0.0022	3
Sum				-0.0161	

$$\Delta X\, a_1 = -0.0047 \cdot 0.7459 \cdot 1.5357 = -0.0054$$

$$\Delta X\, a_2 = 0.0893 \cdot -0.0622 \cdot 1.5357 = -0.0085$$

$$\Delta X\, a_3 = 0.0893 \cdot 0.6837 \cdot -0.0357 = -0.0022$$

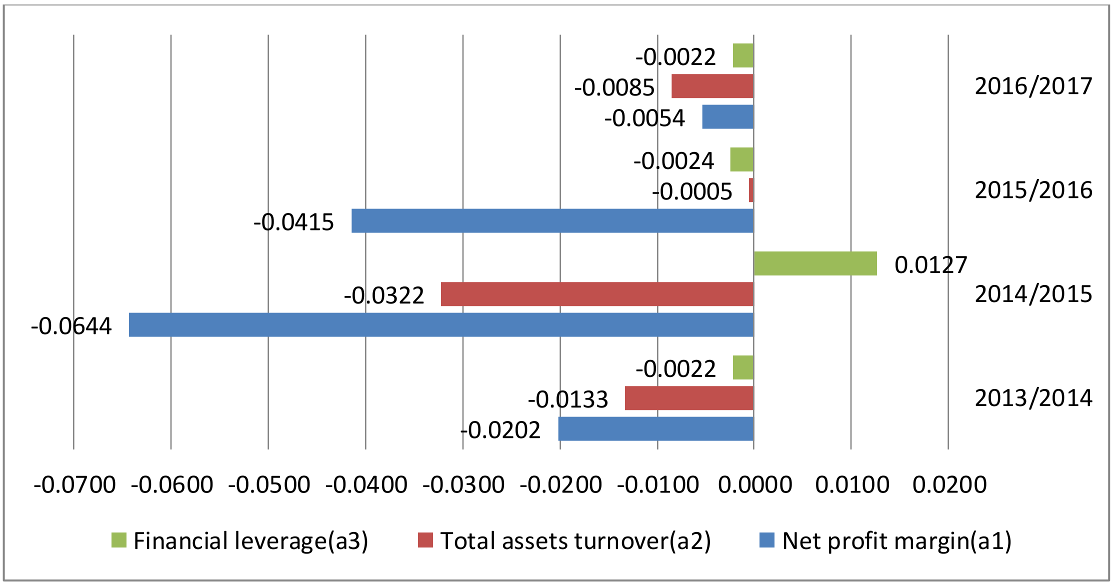
We can see from the Tab.4.20, the result of the sum of gradual changes is equal to the absolute change of ROE which is -0.0161 between 2016 and 2017.

We have calculated the gradual changes of every component ratio from 2013 to 2017. And we can get the conclusion that the sum of the gradual changes of the basic ratio is equal to the absolute change of ROE. Then the Tab.4.21 and Chart.4.15 will show and compare the integration and the tendency of the gradual changes of ROE from 2013 to 2017.

Tab. 4.21: Results of gradual changes of ROE of PRADA from 2013 to 2017

$\Delta X a_i$	2013/2014	2014/2015	2015/2016	2016/2017
Net profit margin(a_1)	-0.0202	-0.0644	-0.0415	-0.0054
Total assets turnover(a_2)	-0.0133	-0.0322	-0.0005	-0.0085
Financial leverage(a_3)	-0.0022	0.0127	-0.0024	-0.0022
Sum	-0.0357	-0.0839	-0.0445	-0.0161

Chart.4.15: Trend of gradual changes of ROE of PRADA from 2013 to 2017



From the Tab.4.17, we can see the result of ROE of PRADA from 2013 to 2014, was influenced mostly was net profit margin which was -0.0202, and secondly was total assets turnover which was -0.0133, and lastly was financial leverage which was -0.0022. And we can know easily the three numbers of these ratios are all negative, which mean every one of them increases, will affect ROE to decrease. So the absolute change of ROE between 2013 and 2014 was a negative number, which is -0.0357. However, we should know these component ratios if are all negative will be not beneficial to the company, because it means the return on equity is declining in the next year.

From the Tab.4.18, we can see the result of ROE of PRADA from 2014 to 2015, was influenced mostly was net profit margin which was -0.0644, and secondly was total assets turnover which was -0.1731, and lastly was financial leverage, we need to pay attention, which was 0.1308, a positive number. Because the net profit margin and total assets turnover have a larger influence than financial leverage because the absolute value is bigger. So the absolute change of ROE between 2014 and 2015 was still a negative number, which is -0.0839.

From the Tab.4.19, we can see the result of ROE of PRADA from 2015 to 2016, was influenced mostly was net profit margin which was -0.0415, and secondly was financial leverage which was -0.0344, and lastly was total assets turnover, which was -0.0005. We can see they all are negative again from 2015 to 2016 just like from 2013 to 2014. So the absolute change of ROE between 2015 and 2016 was still a negative number, which is -0.0445. It shows the return of equity of the company is still declining again which is not good for the shareholders in the company.

From the Tab.4.20, we can see the result of ROE of PRADA from 2016 to 2017, was influenced mostly was total assets turnover which was -0.0085, and secondly was net profit margin which was -0.0054, and lastly was financial leverage, which was -0.0022. We can see they all are also negative. So the absolute change of ROE between 2016 and 2017 was still a negative number, which is -0.0161. But we can know although it is still negative, the absolute value is smaller than other years, which shows the return of equity of the company is still declining but more slightly from 2016 to 2017. PRADA has started adjusting to try to close the gap of return on equity.

And then we put all the results from 2013 to 2017 together in Tab. 4.21. And we can see just a component ratio was positive, it is financial leverage from 2014 to 2015 which is 0.0127, but is a very smaller absolute value than other ratios. And we can find easily other results were all negative from 2013 to 2017. Therefore, the final results of

ROE were all always negative during these years. Then we can see the Chart.4.15, we can find that the financial leverage always had the smallest effect on ROE, except it had a bigger influence with a positive number 0.0127 from 2014 to 2015. And the net profit margin had the biggest influence on ROE from 2013 to 2016. And the total assets turnover influenced ROE secondly in general. But we can see it affected mostly from 2016 to 2017. Then we can know the determinants are changing all the time, in other words, one of these component factors can't keep affecting ROE in the most forever, because they can be influenced by different items in the financial situations at that time.

4.6 Summary

We have a summary of the chapter 4 in this part by using the results of five sections: the profitability ratios, liquidity ratios, solvency ratios, activity ratios and DuPont analysis. They can help us to know the company more easily.

From the profitability ratio, the operating profit margin is gradually decreasing from 26.99% to 13.54% from 2013 to 2017, the net profit margin is also declining gradually from 19.21% to 8.93% from 2013 to 2017, and the return on assets is still decreasing from 26.28% to 9.26%, then the return on equity is going down from 27.17% to 9.15% from 2013 to 2017. We can know the four kinds of ratios of profitability ratio is all falling from 2013 to 2017, especially the downward trend is very rapid and clear from 2014 to 2016. Because from 2014 to 2016, the costs have increased greatly, and the Asian market, which accounts for one third of the group, has been affected by the exchange rate. Some countries hit the tourism market seriously, and the luxury market did not recover until 2017. It was very challengeable for PRADA especially in 2016, during the transition period, the group has been making plans to develop its brand, adjusting and reforming its business processes, and reducing costs.

From the liquidity ratio, the current ratio is going up from 1.87 to 2.07 from 2013 to 2014, then going down to 1.70 from 2014 to 2015, and then started increasing again to 2.84 from 2015 to 2017. So the current ratio is going through continuous fluctuation in the recent years. The quick ratio is also going through a same process, increasing from 1.41 to 1.43 from 2013 to 2014, then abruptly decreasing to 1.12 from 2014 to 2015, finally increasing again to 2.02 from 2015 to 2017. And the cash ratio is also increasing from 0.77 to 0.80 from 2013 to 2014, and decreasing from 0.80 to 0.64, then increasing again from 0.64 to 1.13 from 2015 to 2017. Then we can find these three ratios of liquidity ratio are all abruptly declining from 2014 to 2015, and since 2015, they started recovering growing again. So we should know about the reason of changing very significantly from 2014 to 2015. Actually we have explained before, the current liabilities had a huge increase from 2014 to 2015. It shows the company did not develop very well in 2015, so it needed to have a lot of funds to support, thus the company had borrowed more shot-term loans from banks and used more derivative financial instruments. As we know, the larger the liquidity ratio is, the better for the company to convert into cash to pay off short-term debt more easily and quickly. So we can see the company has a weaker liquidity ratio in 2015, but current liabilities have been tried to decrease in the later years from 2016.

From the solvency ratio, we can see debt ratio is decreasing from 31.16% to 30.52% from 2013 to 2014, then increasing from 30.52% to 36.31% from 2014 to 2015, lastly decreasing from 36.31% to 33.34% from 2015 to 2017. And the debt-to-equity ratio also has the same tendency, decreasing from 45.26% to 43.93% from 2013 to 2014, then increasing from 43.93% to 57.01% from 2014 to 2015, finally going down again to 50.00% from 2015 to 2017. The interest coverage is continuously decreasing from 124.78 to only 16.83 from 2013 to 2016, and then started going up to 23.95 in 2017. We can see there is a huge fluctuation of rising of debt ratio and debt-to-equity ratio from 2014 to 2015. We know the smaller these two ratios are, the better for the company to have the solvency. Therefore, we can see the company face the problem in 2015, because the current liabilities and non-current liabilities are both increasing very fast in this year. From the whole point, the company has a good solvency.

From the activity ratio, we can see the average collection period has a relatively stable tendency, ranging from 25.79 to 35.10 in the recent years, except it has only 25.79 in 2016. So we can get PRADA has about 30 days to gain accounts receivable. And the accounts receivable turnover is also keeping stable about 11, just in 2016 it is up to 13.96. And the inventory turnover is decreasing from 2.68 to 1.42 from 2013 to 2016, and then increasing to 1.70 in 2017. The total assets turnover is gradually decreasing from 0.974 to 0.684 from 2013 to 2017, especially in 2015, it decreased more obviously in 2015. We can find the average collection period and accounts receivable turnover have a distinct change in 2016. Because the company has been making plans to develop its brand to deal with the recessionary financial situation, and at that time, the economy began to recover. We can also find the inventory turnover decrease in the former years, and then grow again in 2017, which shows the company has realized it is not beneficial to have a lot of inventories, so should manage more strictly to control the inventories. Besides, the reason of total assets turnover decreasing all the time in the recent years is revenues are rising more slowly than total assets. In general, we can see PRADA has a good activity ratio, a high efficiency to use the resources.

From the DuPont analysis from 2013 to 2017, we can know the net profit margin had the largest influence on ROE from 2013 to 2016. And they all are negative number, leading to the gradual changes of ROE are also negative, although it is an exception between 2014 and 2015, the financial leverage is a positive number with 0.0127, but the absolute values is smaller than other component factors, so ROE is still a negative number with -0.0839. From 2016 to 2017, we can see the biggest factor of affecting ROE is total assets turnover. Besides, we can get the conclusion the sum of gradual changes is equal to the absolute change of ROE. On the whole, we can find it is the net profit margin to influence ROE most deeply, so the company should pay more attention to the net profit margin. And the company can adjust and improve it by using two main ways with the aim of increasing the earnings after tax. On the one hand, the company can increase the revenues by rising the luxury prices and providing better service. On the other hand, the company needs to control the costs and expenses constantly by adopting more efficient and strict management, predetermining the cost limit, increasing enterprise analysis and auditing cost strength.

5 Conclusion

Financial analysis is a very important activity in financial activities. As we know, the financial data we research is mainly from the balance sheet, income statement and cash flow statement from the company's annual report. And we also should know about the company's history and basic business information, even the competition in the industry. Besides, we need to adopt some financial analysis methods to analyze financial data of the company, the common-size analysis, including vertical common-size analysis and horizontal common-size analysis, and financial ratios, including profitability ratios, liquidity ratios, solvency ratios, activity ratios and DuPont analysis. By conducting these financial analysis, we can know the financial situations of the company more comprehensively and accurately. And if the company did not operate very well in some tome, it can adjust to the condition in time according to these analysis results.

The aim of the thesis was to analyze the financial situations of PRADA from 2013 to 2017 by conducting common-size analysis and financal ratios.

In chapter 2, firstly, we introduced three financial statements, they are balance sheet, income statement and cash flow statement. And we have given the concrete explanation and the tables of these structure. Secondly, we described the common-size analysis, divided into vertical common-size analysis and horizontal common-size analysis. Besides, we have given specific formulas and definition. Finally, we introduced the financial ratios, including profitability ratios, liquidity ratios, solvency ratios, activity ratios and DuPont analysis. In this chapter, we mainly explained the definition and characteristics of each ratio, and the calculation formulas, And we have adopted these formulas in the following chapters.

In chapter 3, we mainly introduced the financial characteristics of PRADA, by describing the basic information of the company, we can know more about business condition of the company. Firstly, we introduced the history of development of the enterprise in brief, and the basic business information of PRADA, including the employees, industry activities, group logistics, sales strategy, and the competition of the company. Secondly, we conducted the common-size analysis method to analyze the company, listing the balance sheet and income statement of PRADA from 2013 to 2017. And we calculated the absolute changes and relative changes of the items of the financial statements. Besides, we gave some explanations of the reasons of some changes and some helpful advice to the development of the company.

In chaper 4, we used the financial ratios analysis to research PRADA from 2013 to 2017 by conducting calcuation formulas from the chapter 2 and making some tables or charts. In profitability ratios, especially a significant decline from 2014 to 2016. The revenues were keeping relatively stable, but the net profits were continuously decreasing quickly from 2014. The main reason was the costs and expenses were increasing especially from 2014 to 2016. And Asian market accounted for one third of the group, had been affected by the exchange rate. Some countries hit the tourism market seriously, and the luxury market did not recover until 2017. In liquidity ratios, they were relatively unstable, a distinct decline from 2014 to 2015. Because the current liabilities had a huge increase from 2014 to 2015, especially the short-term loans from banks and derivative financial instruments. But it was not good for any company to have lots of debts, so the company decreased current liabilities later. In solvency ratios, we could find there is a big change in 2015, so it was important to control the amount of liabilities and optimize the capital structure. On the whole, we could see the company had a strong solvency, which meant a stable and healthy development of the financial situations. In activity ratios, we could see PRADA had a relatively stable ratio to use resources effectively. But the inventories were increasing fast from 2014 to 2016, so the company needs more strict management system to control inventories. In the DuPont analysis, we used the gradual changes analysis of the decomposition of ROE from 2013 to 2017 and drawn a conclusion that net profit margin affected the final result of ROE mostly. Then was the total assets turnover, the least one was financial leverage. However, we have found the ratios were mostly negative, meaning the influence to the return on equity is negative. It was not beneficial for the company, so the company should improve the return on equity for its business development.

At last, we gave some helpful suggestions to the company according to the analysis. In the recent years, the company had a problem of having many costs and liabilities. So the company should control and save the costs or expenses in the process, at the same time, also ensure the service quality and management. And the company should control the loans from banks and derivative financial instruments, and optimize the capital capture. Besides, it was important for the company to control the amounts of the inventories, check the inventories on a regular basis and then adopt a more effective marketing sales strategy to develop its branch, constant design and innovation to attract more customers. For the expansion of the market is very important, although in recent years the luxury industry were affected by inflation and exchange rate and the influence of external factors, but we could see the company's income was quite stable, but because of increasing employee wages and prices, the costs were increased. In addition, capital structure needed to be optimized. PRADA also could increase publicity by advertising to attract more consumers. The competitive strength of this enterprise was quite strong, so there was still room for continuous development. The company could make different sales plans according to different regions and age groups through constant field investigation, so as to meet the needs of different customers. If PRADA could improve them well, the company would have a better development and stronger competitive strength in the luxury industry in the future.

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List of Abbreviations

A	Assets
ACP	Average collection period
ART	Accounts receivable turnover
EBIT	Earnings before interests and taxes
EBT	Earnings before taxes
EAT	Earnings after taxes
NPM	Net profit margin
OPM	Operating profit margin
IT	Inventory turnover
TAT	Total assets turnover
R	Revenues
ROA	Return on assets
ROE	Return on equity

Decleration of Utilization of Results from the Bachelor Thesis

Declaration of Utilisation of Results from a Bachelor Thesis

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Ostrava dated 10.04.2019

韩雨露 Yulu Han

List of Annexes

Annex 1: Balance sheet of PRADA. (thousand €)

	2013	2014	2015	2016	2017
Assets					
Non-current assets					
Property, plant and equipment	857,299	1,230,192	1,474,218	1,517,779	1,542,684
Intangible assets	878,750	901,289	943,304	932,238	921,800
Associated undertakings	23,024	21,186	30,529	17,354	11,775
Deferred tax assets	176,057	201,245	280,983	280,572	247,266
Other non-current assets	61,569	69,867	91,353	113,954	123,361
Derivative financial instruments-non current	1,018	1,430	1,106	721	0
Receivables from, and prepayments to,-non current	113	1,487	17,429	5,499	0
Total non-current assets	1,997,830	2,426,696	2,838,922	2,868,117	2,846,886
Current assets					
Cash and cash equivalents	571,746	568,414	708,966	680,601	722,214
Trade receivables, net	304,525	308,405	346,284	254,183	285,504
Inventories	343,802	449,903	654,545	692,672	526,941
Derivative financial instruments-current	43,060	13,984	6,287	11,682	7,045
Receivables from, and prepayments to,-current	19,493	5,993	3,240	19,629	14,964
Other current assets	104,823	114,897	180,633	229,671	253,375
Total current assets	1,387,449	1,461,596	1,899,955	1,888,438	1,810,043
Total assets	3,385,279	3,888,292	4,738,877	4,756,555	4,656,929
Liabilities					
Non-current liabilities					
Long-term financial payables	78,830	207,950	255,203	520,475	547,628
Obligations under finance leases non-current	518	19	0	0	0
Long-term employee benefits	45,538	63,279	85,754	69,405	67,211
Provision for risks and charges	46,914	52,660	63,695	69,233	82,323
Deferred tax liabilities	55,636	42,671	41,634	36,882	31,140
Other non-current liabilities	84,905	98,982	128,752	161,317	179,072
Derivative financial instruments non-current	384	1,469	17,283	10,047	8,250
Payables-non current	0	13,247	13,384	0	0
Total non-current liabilities	312,725	480,277	605,705	867,359	915,624
Current liabilities					
Short-term bank overdrafts and financial payables	176,145	62,433	263,356	270,766	151,211
Payables-current	5,599	4,894	3,083	5,244	5,542
Trade payables	330,613	348,534	437,420	281,699	256,094
Current tax liabilities	97,148	132,145	133,914	80,744	65,467
Derivative financial instruments-current	912	3,803	56,772	11,095	13,634

Other current liabilities	131,645	154,666	220,480	142,271	144,827
Total current liabilities	742,062	706,475	1,115,025	791,819	636,775
Total liabilities	1,054,787	1,186,752	1,720,730	1,659,178	1,552,399
Equity					
Share capital	255,882	255,882	255,882	255,882	255,882
Other reserves	1,480,747	1,853,325	2,163,129	2,355,023	2,401,500
Translation reserve	-42,288	-49,438	130,996	138,547	144,791
Net profit for the year	625,681	627,785	450,730	330,888	278,329
Shareholders' equity -non-controlling interests	10,470	13,986	17,410	17,037	24,028
Total equity	2,330,492	2,701,540	3,018,147	3,097,377	3,104,530
Total liabilities and equity	3,385,279	3,888,292	4,738,877	4,756,555	4,656,929

Annex 2: Income statement of PRADA . (thousand €)

	2,013	2,014	2,015	2,016	2,017
Net revenues	3,297,219	3,587,347	3,551,696	3,547,771	3,184,069
Costs of goods sold	-920,678	-938,698	-1,001,117	-980,206	-894,957
Gross margin	**2,376,541**	**2,648,649**	**2,550,579**	**2,567,565**	**2,289,112**
Operating expenses	-1,486,760	-1,709,412	-1,849,028	-2,064,672	-1,857,931
EBIT	**889,781**	**939,237**	**701,551**	**502,893**	**431,181**
Interests	-7,131	-17,357	-34,304	-29,872	-18,003
Dividends	966	1,016	455	2,311	2,252
Income before taxes	**883,616**	**922,896**	**667,702**	**475,332**	**415,430**
Taxation	-250,339	-285,091	-208,484	-141,994	-131,240
Net income	**633,277**	**637,805**	**459,218**	**333,338**	**284,190**